

JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

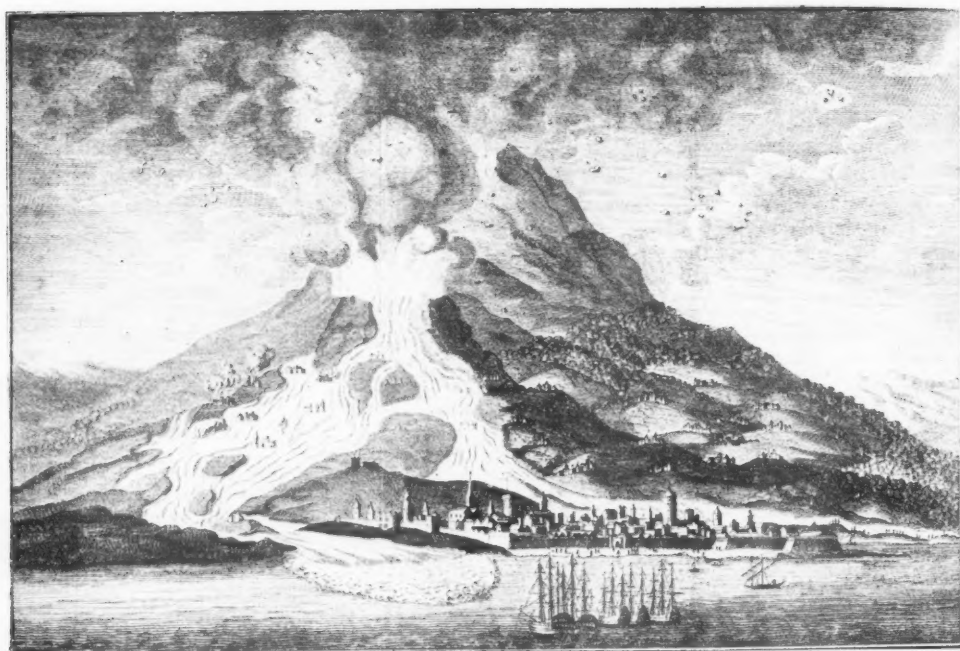
THIRD SERIES

VOL. 43. No. 19

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ETNA. From a print published by Fielding 1783 (See pp. 1027-1032)
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JOURNAL OF THE ROYAL INSTITUTE *of* BRITISH ARCHITECTS

VOL. 43. 3RD SERIES

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No. 19

Journal

THE L.C.C. PROPOSED BUILDING BY-LAWS

In compliance with the requirements of the London Building Act (Amendment) Act, 1935, the London County Council "advertised" the proposed Building By-laws on 16 August. By the courtesy of the Council, the proposed by-laws were despatched to the Royal Institute on 31 July; but even so, it is unfortunate that any comment thereon must be made "within six weeks after the publication of the said advertisement." The Act so provides. It is still more unfortunate that these six weeks should fall within the period when the institutions concerned in the by-laws are in recess. However, immediately on their publication the Science Standing Committee began the strenuous task of examining the by-laws in detail within the time allotted.

Whatever may be the result of the detailed examination, a general survey of the document reveals the fact that this is not a mere patching-up of old enactments, but an honest endeavour to provide a complete code consistent with present-day building science, and it should be in the spirit of aiding in a good work that any "objections" should be lodged. Building legislation affects many interests and the drafting of by-laws involves a complexity of considerations. For this reason, the more completely the work is adjusted to all view-points the more successful must be the result.

The principal object of any building code is to secure safety, and the most acceptable code is that which attains its object with the minimum of restrictions as regards design and method of construction. The governing principle of all sound building legislation is *safety with freedom*.

The most direct method of attaining this end is that of stipulating the loads to be provided for, and the permissible stresses in the various materials, leaving it to the designer to satisfy the requirements in any way he pleases—subject to certain prescribed minima as regards protection from weather and fire prevention. But this method of control involves calculations for everything, thus hampering the designer in one direction while conferring freedom in the other. Moreover, it must be remembered that by-laws are not for the architect and the engineer only, and that many persons

responsible for the erection of buildings are not able to make such calculations.

The alternative method is the one generally adopted, that of governing construction by empirical rules such as (for example) the schedules of wall thicknesses in the model by-laws and the London Building Act. Such rules must, of course, provide for the worst conditions compatible with the stipulated details, thus penalising the architect who employs stronger materials, better construction or more effective methods of sustaining his loads than contemplated by the empirical tables.

Whatever faults may be found in the present proposed by-laws, credit is due to the London County Council for the endeavour to meet these difficulties—in fact, in the case of walls and piers, that endeavour has extended to the simultaneous adoption of both methods of legislation, giving the necessary data for those who wish to calculate, and schedules of thicknesses for those who do not.

It is understood that the London County Council also proposes to make by-laws for the use of constructional timber, but has not yet completed its investigations. The withholding of these by-laws pending the "completion of investigations" is suggestive of an endeavour to place timber construction on a scientific basis. The usual timber by-laws and the general constructional practice in relation to that material represent a set of time-honoured traditions which have little to recommend them other than the length of their lineage. The advent of Douglas fir in general construction, moreover, has rendered the usually accepted scantlings still more questionable. If the London building by-laws are ultimately to include rules for timber construction actually based on investigation instead of ancient custom, the London County Council will have performed a national service, and it may well be that this is one of those cases where the by-product is of even greater value than the principal production.

REGISTRATION AND EDUCATION

Under the provisions of the Architects' Registration Act at least half the total fees received in each calendar

year have to be devoted to the provision of scholarship and maintenance grants for architectural students whose means appear to the Council to be insufficient to enable them to pursue their studies. The Registration Council has recently published a statement that during the second year of the scheme four students have been assisted by grants varying from £50 to £138, the actual amounts granted being varied so that in each case the students may complete their training reasonably free from financial disabilities. In addition to these new grants four similar grants made last year, varying between £40 and £147, were renewed. The grants are awarded in the first instance for one year only and are renewable from year to year until the students have completed their training, the scheme being based on the supposition that each scholarship will be required for a maximum of five years. It is proposed to offer new grants annually up to £350 in value apart from the continuation of any scholarship which may be in existence.

It might be said that as the very basis of the Act is the profession's desire to establish, maintain, and make widely known a standard of professional competence, The existence of this scholarship scheme is a just proof that this fundamental of Registration is taken seriously; not only is the idea of architectural education in schools given a well-deserved fillip, since all the scholarship students will go to recognised architectural schools, but the money is being applied so as to help those who most deserve it; there are two fair conditions for a scholarship—ability and need. The Registration Council and the schools can be trusted to maintain the standard of ability and the Council by granting their scholarship to students, who could otherwise not contemplate so expensive and drawn-out a training as is required to make a competent architect nowadays, is fulfilling its obligation to help those who most need help. Among the scholars are sons of a miner, a railway signalman, and an upholsterers' cutter. *The Times* gave an interesting leading article to the scheme when the announcement with regard to the recent awards was made. This provision of the Act, the article suggested means "that every architect who pays his registration fee contributes something to the discovery of architectural genius and to enabling that genius, if poor, to obtain the necessary professional qualifications. It secures, as the mere fact of registration does not, that the best artistic talent in architecture shall be enlisted in the public service. . . . The architectural profession as a whole takes over in effect the function that was formerly fulfilled, and gloriously fulfilled, by private patronage—the system that produced Inigo Jones and Hawksmoor. Their equivalents, if any, in genius in the present and future will be discovered and launched by the profession out of the fees paid for the protection of itself and the public against incompetency on the practical side of architecture.

THE BUILDING EXHIBITION—AN R.I.B.A. MEMBERS' ROOM

The twentieth biennial Building Exhibition will be opened at Olympia by Lord Stanhope, the First Commissioner of Works, on 16 September. Among the special attractions of the exhibition, in addition to the stands of 400 trade exhibitors, will be a special section where the Building Research Station will demonstrate their work and, as in previous years, the Housing Centre is organizing a *New Homes for Old* exhibition to urge the provision of better and more imaginative housing and welfare facilities for all ages. The exhibition, which is being staged with the co-operation of the Modern Architectural Research Group and the Architects' and Technicians' Organisation, is divided into five main sections showing the housing and welfare requirements of infants, schoolchildren, men and women in the home, men and women in the community and aged people at the end of life.

This year again a large room on the first floor over the Addison Road entrance has been allocated to the R.I.B.A. as a place where members can meet their friends, make business appointments, write letters, and rest. There will be a telephone for the use of visitors to the room, and a typist will be in attendance to take down members' letters and to assist them in any business they may wish to conduct while at Olympia. Parcels and letters addressed c/o the R.I.B.A., at the Building Exhibition, will be delivered to the R.I.B.A. Members' Room. Light refreshments will be obtainable. As at the last exhibition the use of the room has been extended to members of the R.I.B.A. Allied Societies, the Architectural Association, the Building Industries National Council, the Architecture Club and the Council for the Preservation of Rural England. Members should note that they can enter the room (and the exhibition) through a private door and staircase in the Addison Road entrance hall without going through the turnstiles.

AN A.B.S. DANCE AT OLYMPIA

Once again Mr. Greville Montgomery, the promoter of the exhibition, has generously offered to give the entire proceeds of a dance which is to be held at Olympia on Friday 25 September to the Architects' Benevolent Society. A leaflet is enclosed with this number of the *JOURNAL*, giving full particulars of the dance. Attached to the leaflet is an application form for tickets. Anyone who has been to the two previous Building Exhibition dances will need no further incentive to take tickets than this reminder. The price is £1 each (three for 45s., six for 90s.). They may be obtained from Mrs. Lanchester, Chairman of the R.I.B.A. Social Committee; or from the Secretary of the A.B.S., 66 Portland Place. All who hope to go are asked to send in their applications for tickets soon.

THE LAYOUT AND DESIGN OF DEPARTMENTAL STORE FITTINGS IN RELATION TO THEIR USES

A THESIS SUBMITTED IN THE R.I.B.A. FINAL EXAMINATION

J. SPEDAN STEDMAN, STUDENT R.I.B.A.

INTRODUCTION

The science of psychology, which has only recently been brought into line with advances in the other sciences, has demonstrated what an enormous influence environment has upon our lives; and this is just as true of the immediate interiors of our buildings as of the general atmosphere of town and country.

The world moves slowly, but there are abundant signs that local authorities and laymen generally can be, and sometimes are, persuaded to develop their towns, villages, and estates with a proper regard for their social atmosphere and amenities, rather than with a purely literal adherence to out-moded bye-laws, and with an eye to the quickest possible return on the money expended. The number of well-planned areas is growing yearly, and stands out in contrast to the many unfortunate legacies of the past, and to the short-sighted speculation which is still being practised.

To walk through a well-planned town or village is a two-fold pleasure; the one æsthetic, because of the distinction conferred by well-placed buildings, points of interest, and the green settings provided by trees, avenues and gardens; the other practical, because of the directness of approach, directness of communication, and freedom from the perils of traffic. Stores are miniature cities, and they require the same process of "town-planning," in other words, of an initial determining plan and programme which will make the most of their amenities, their circulations, and their opportunities for display. They require it, in fact, to an even greater degree, because atmosphere is the keystone of goodwill, and goodwill to the store manager is of paramount importance, for the life of the store

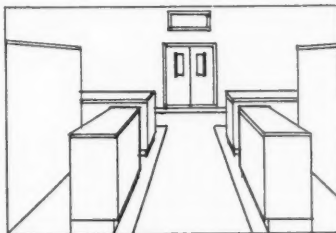
depends on the return of satisfied customers and the attraction of new ones.

It is, therefore, reasonable to suppose that a carefully considered environment within the store will have an appreciable effect on its turnover. This being so, it is my present purpose to indicate how a suitable environment in a store is built up, the chief factor being that each fitting should be designed and constructed economically to fulfil its purpose, and the whole planned in conjunction with the main structure to suit the type of trade or trades for which it is required.

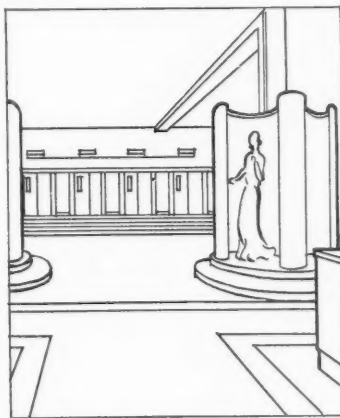
The appearance of anything depends not only on itself but on its surroundings and background and the light in which it is seen, which together are commonly termed the setting. In the case of a store, this setting—apart from the human element—consists of the fittings and the general structure, which, although they are often in the hands of different designers, should be considered as complementary parts of the same problem. The store as a whole, therefore, being a part of the mechanism for display, should be carefully considered for its effect on the appearance of the merchandise, for it can either please the viewers and help to sell the goods, or it can detract from the display and be an actual deterrent to trade. The fittings, too, should not only be pleasant in themselves, but their design should be subservient to and entirely fitted for their purpose.

In the past a store was probably what the word conveys, a place of storage and of safe keeping, a warehouse, and the main requirements of the shelving were capacity and strength.

To-day, however, the store is primarily a place of selling, with



A vista should end with a suggestion of more things to see on other floors



Display and open space are essential to the lift approach

storage as a mere incidental, so that not only capacity and strength, but display qualities, accessibility of stock, portability and many other characteristics are demanded of them, and this has produced a large variety of units.

It can readily be seen that with different stocks to sell, different environments are required, and different fittings are called for, and each in itself needs careful consideration not only as a unit but as a part of its setting.

Here, then, is a wide and interesting problem awaiting the attention of the architect, and one which, in this country at least, he is seldom called upon to solve.

GENERAL PLANNING

COLUMN SPACING

From the point of view of selling space, and the layout of departments it would be an advantage if columns were eliminated. In a contemporary steel-framed building this would necessitate floor beams of considerable depth, with a consequent loss of floor heights, and expensive erection costs. It has been found in practice that steel spans in the neighbourhood of 18 to 20 feet are at present the most economical structurally.

For the purpose of a store, however, the above spans often have to be exceeded to allow sufficient space for customers' and assistants' gangways between the fittings, while the shape and size of the site has a considerable bearing upon the column layout.

The following are the approximate column spacings of the principal departmental stores which have been constructed of recent years.

In England

Barkers (newer portion)	..	23' 0" by 23' 0"
Derry & Toms	..	21' 0" by 21' 0"
Dickens & Jones	..	23' 0" by 23' 0"
Gamages, Oxford Street	..	29' 0" by 29' 0"
(Varies, flats above)		(Maximum.)
Harrods (newer portion)	..	30' 0" by 30' 0"
Peter Jones (site irregular)	..	24' 6" by 21' 0"
Peter Robinsons	..	22' 0" by 22' 0"
Selfridges (newer portion)	..	22' 6" by 24' 6"
Whiteleys (varies, but averages about)	..	30' 0" by 30' 0"

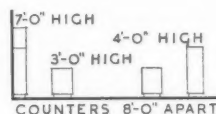
In America

Filene Store, Boston	..	22' 0" by 22' 0"
"The Hub," Chicago	..	22' 0" by 22' 0"
Lasalle & Koch, Toledo	..	20' 0" by 20' 0"
Macy's (old portion)	..	20' 0" by 20' 0"
Macy's (new portion)	..	39' 0" by 26' 0"
Saks Store, New York	..	22' 0" by 26' 0"
Wanamakers, Philadelphia	..	22' 0" by 22' 0"

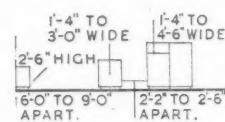
These figures indicate that the column spacing in English stores is practically the same as in American



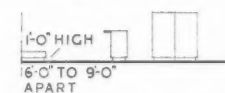
Secondary gangway with no chairs



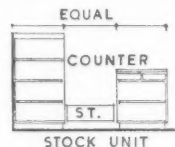
Secondary gangway with room for chairs and space to pass



Main gangway with centre tables (half section)



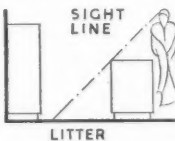
Main gangway with centre display



Working space controlled by deep stock



Minimum working space



Too wide a working space is expensive and untidy floors are visible

stores, despite the greater load per support arriving from the greater height of the American examples.

It is also worth noting that in the majority of stores a square spacing has been adhered to. In all probability those that are not square on plan are governed by irregularities in the size and shape of their sites, as, for example, Peter Jones, in Sloane Square.

The square bay is logical structurally and also for the layout of fittings, since at any time standard length units can be moved to form gangways at right angles to their original positions.

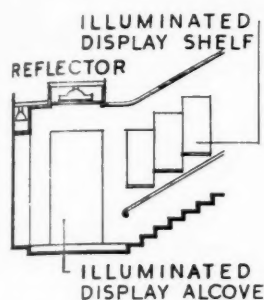
SIZES AND RELATIONSHIP OF GANGWAYS TO DOORS, LIFTS, ETC.

Gangways are the means of access from the street to the departments, and from one department to another. Some gangways will, therefore, be main thoroughfares, others will be bye-passes, and yet others places of selling, but on no account are backwaters, or cul-de-sac desirable, except in special saloons where privacy is required.

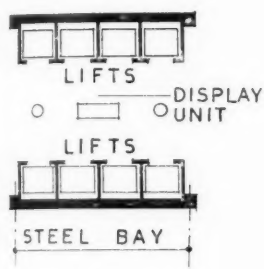
The main thoroughfares should be wide and lead from entrances direct to some circulation point, and be flanked with displays large in mass, and in positions that will entice those interested into side walks where purchases can be made in comfort.

Stairs, lifts and escalators are the best terminations to the main thoroughfares or vistas, for where light wells are not possible other floors will be subconsciously suggested, and the bad effect of exits opposite entrances so apparent in Messrs. Peter Robinson's main building will be avoided.

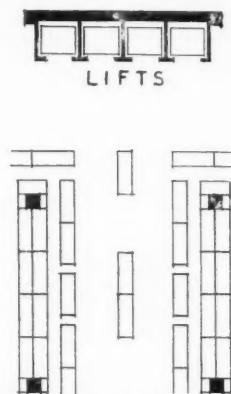
Subsidiary gangways, although not pulsing with traffic, will need to be of a comfortable width, for



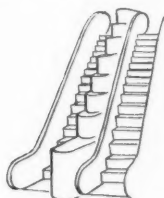
Section of staircase: Good lighting and display will take customers halfway to anywhere



Plan: A lift arrangement giving good service to the upper floors and a saving of space



Plan: A small lift approach suitable for a provincial store



Escalators are the most efficient form of transport for service and display where enclosure can be avoided

here the majority of the purchases are to be made, and space for seats and small central displays should be available.

The space behind the counters varies according to the length of the counters, type of trade and method of payment, for if the assistant pays at a desk more allowance for movement will be necessary.

Gangways on the upper floors should, of course, be wider where the transactions do not necessarily take place over a counter, and the whole floor space becomes selling and display area. As gangways are the arteries of the store, they should always be of liberal width, for in slack periods displays can fill any unwanted areas, while the loss of customers and goods is likely to be considerable at peak periods if width is insufficient. Bearing this in mind, the main gangways should be anything from 12 feet to 18 feet in width, according to their position, length and use.

Subsidiary gangways, if provided with customers' chairs, should be at least 8 feet wide, and where centre tables exist at least half this width will be required on either side of these tables.

Working gangways behind counters are governed mainly by the class of goods being sold, and where wide

materials, such as velvets, which will not conveniently fold, are stored (usually in rolls endwise), the gangway space has to be at least the width of the materials, so that the rolls can be removed from the lower part of the fittings and placed on suitable counters for inspection or cutting.

For all normal trades, however, 2 ft. 6 in. may be considered a comfortable width between counter and fitting for assistants to pass each other; while 2 ft. 2 in. is a bare minimum working space, and only suitable where small articles are sold, in such departments as Haberdashery and Ribbons. Wide gangways behind counters should be avoided, as they are wasteful of space, and are likely to expose the floor litter to customers' view.

The space between counter ends naturally varies according to the length of the counters, and the movement of assistants, but 1 ft. 6 in. can be considered a minimum between counters not exceeding 10 ft. long and 2 ft. 6 in. wide.

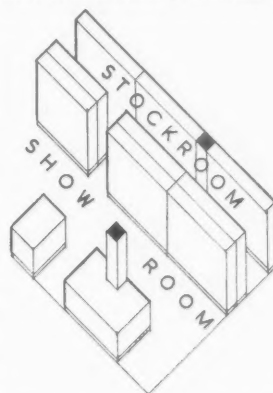
SIZES OF STAIRCASE, LIFT AND ESCALATOR APPROACHES

In the case of large stores, the London Building Act requires that at least one tower staircase be constructed upon the perimeter of the building, but several internal staircases are still a necessity, and have often become relatively important as focal points of design.

These internal staircases begin at ground-floor level, and are usually of an ornamental character either in detail or mass, and are thus often large, but 5 ft. between the rails can be considered a minimum for an average store. At the foot and head, and sometimes on the landings of these staircases, provision is often made for displays.

From the foregoing it can be seen that the area of approach, or the access space at foot and head of staircase, becomes considerable: 12 ft. by 8 ft. (main gangway by subsidiary gangway), can in most cases be considered a good average.

On a shallow site lifts are usually planned against the rear wall facing the entrances of the store, and are then grouped in a line, or concave curve of not more than eight or nine in number. The alternative adopted by Selfridges is to face two batteries of four lifts towards each other, and so save the customers walking along a whole line of lifts.



Non-structural and handy stock rooms of whose existence the customer is aware

Where the lifts are planned in one line they are usually at the edge of a steel bay, and the width of approach (which should be at least equal in width to a main gangway) is one steel bay, less lift enclosure and counter return. Where the lifts face each other a saving in space can be effected, for the distance between the lifts need not be equal to twice the width of a main gangway, but only about one and a half times as wide, according to display and traffic requirements.

Escalators are usually 3 ft. to 3 ft. 2 in. wide, and so need not have such wide approaches as staircases, but, owing to their one-way action, require twice as many approaches, and if placed alongside each other give ample opportunity for the construction of permanent display cases between them.

TYPES OF LAYOUT AND COMPARISON OF SELLING AND STORAGE CAPACITY

Stock-rooms are very valuable if immediately adjoining the departments selling small goods which customers may wish to take away with them, such as shoes, perfumery, china, glass, etc. This method of storage has been found quite a satisfactory one in the case of specialist shops, but in the general trading departments of large stores this method limits or complicates the natural expansion and movement of departments, and wastes valuable floor area, and so it is usual, although not ideal, to replenish stock from a remote store.

Certain sections of the British public like to see a large quantity as well as a good assortment of merchandise. I would like to suggest, therefore, that where reserve stock is required that it be kept in semi-stock rooms, that is, bays enclosed by the structural walls and/or the show fittings spaced so that free access for assistants is available, and a glimpse of the reserve stock obtained by the customers.

The advantage of this method of storage is threefold ; in the first place the showroom fitting forms the screen wall upon which the stock shelving can be fixed ; secondly, on the moving of the department the stock room may be automatically transferred without structural alterations ; thirdly, supervision and stock control is greatly simplified, saving time and expense.

Owing to the impossibility of reproducing them a series of nine large coloured diagrams illustrating department layout has been omitted here. These diagrams are a repeating typical floor plan having a uniform stanchion layout. Each repeat shows a different arrangement of counters, showcases, etc., for the requirements of the different departments. These are lettered and numbered to accord with the series numbers of the paragraphs in the letterpress describing the departments.

LAYOUT OF DEPARTMENT

NATURE OF STORE

It is essential to know for what section of the public the store intends to cater, before one can begin to plan the fixture layout. The buying public naturally

divides into many sections, but for our purpose three main divisions only need be indicated.

There is the well-known store that relies considerably for its trade upon advertisement, and the visits of ready-cash customers from outlying districts. This store concentrates more on what are commonly called in the trade job lines, and sale weeks of all kinds are in abundance, consequently the positions of the departments are very fluid, and "stunt" attractions within the building are frequent, while "bargain basements" are one of its most popular institutions.

At the other end of the scale we find the store that is composed chiefly of special saloons, as a counter attraction to the small specialist shops which always flourish in large shopping areas. This latter class of store relies on a more discriminating public, and develops fully the personal side of its business mainly with account customers.

There also still exists the store which has grown from the warehouse of the past and has in consequence gathered to itself wholesale and professional customers. Here, as may be expected, the main stock-in-trade consists of servicable rather than made-up or fancy articles stored in large quantities, with the minimum of display.

TYPES AND SIZES OF DEPARTMENTS

For the purpose of fixturing, departments divide mainly into the following groups : (a) Counter trades ; (b) Hardware and display ; (c) Showroom ; and (d) Saloon.

In groups (a) and (b) the general arrangement and effect relies mainly upon scientific layout, and careful planning, the former group requiring natural light, while the latter group is usually successful if placed under artificial light, hence basement trade.

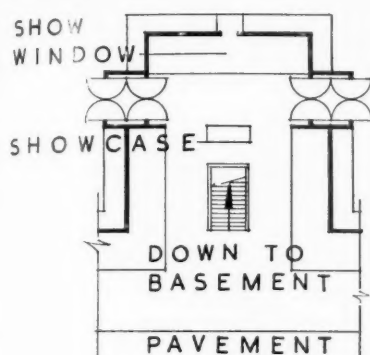
Showrooms, however, call for large open areas, and broad treatment both in structure and colour effects of neutral tones, while the choice of carpet, settees and other accessories is of great importance.

Special saloons give ample scope to the imagination, for example, the Eastern section of Austin Reed's premises in Regent Street.

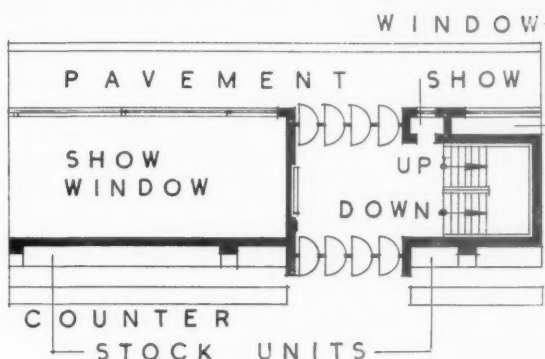
The size of departments, of course, varies according to the amount of trade done or expected to be done therein, but the floor area occupied is greatly affected by the group which the management considers the particular department most suited to form part.

RELATIONSHIP OF LAYOUT TO CIRCULATION

The London Building Act requires that the basement be entirely cut off from the ground and upper floors of the building, and approached only by a separate means of access from the outside of the building. This stipulation isolates the basement for selling purposes, and makes it necessary to place on this floor only those departments that are best separated from the main body of the store, and sufficiently attractive in themselves to draw the passer-by down to them, i.e., Men's Wear, and Inexpensive Departments.



Left: Plan of an arcaded entrance for bargain basement trade. Right: Entrance design as controlled by the London Building Acts; the selling value of the basement is halved in specialist shops



The ground floor, however, has always the greatest trading value, and apart from the basement, is the place of entry. It must give a good impression, and then encourage and assist further exploration. This is usually achieved by concentrating counter trade on it, with fancy departments like Perfumery, etc., arranged near the principal entrances, from which main gangways lead to staircases, escalators and lifts.

Along these gangways and adjoining escalators and stairs there should be judiciously placed small articles which attract the passer-by and sell themselves, while there may be other groups composed of articles to be found in departments on upper floors, to which the shoppers are subconsciously making their way.

The upper floors are less frequented, and so show-rooms and special saloons are more suitably designed here, but well-known "lines" and "stock articles" in which the store is known to specialise can often be placed on the upper floors, or in less accessible parts of the building, not only to utilise these areas to the best advantage, but also to encourage the circulation of the shoppers.

Another means of increasing circulation and the possibility of a sale adopted by some stores is continually to redistribute the departments so that the more regular customers buying particular articles continually pass new varieties of goods.

THE RELATIONSHIP OF DEPARTMENTS TO EACH OTHER

There are ten main divisions into which the many departments can be conveniently divided, as follows:—

1. Furnishing and Household Goods.
2. Piece-goods.
3. Fashions.
4. Special Saloons.
5. Men's Wear.
6. Fancy and Extraneous.
7. Food, Wines, etc.
8. Drugs.
9. Recreation and Sports.
10. General services.

1. FURNITURE of good quality needs to be set in typical rooms, and requires ample floor space as would in normal circumstances be found on upper floors, but where a store specialises in this trade it would be quite reasonable to plan specimen rooms backing on to the show windows.

Linoleum, Carpets, Rugs and Oriental departments must not be near goods which are badly affected by dust, but may with advantage be placed alongside the main furniture section, flanked by Bedding, Household Linens and Soft Furnishings, *i.e.*, curtains, loose covers, etc. It is worth noting that, in connection with this set of departments, an Interior Decorating section could be reasonably expected to function.

Cheaper furniture of the popular whitewood kitchen cabinets type can be conveniently arranged with Ironmongery, which in its turn might well be placed alongside Electrical, China, Glass or "Arts and Crafts," all of which departments require good display areas in the form of large low stands commonly called pot boards, and tiered tables. Except for Soft Furnishings, Carpets and, possibly, Household Linens, all these departments can be made to rely almost entirely on artificial light.

2. PIECE-GOODS departments all need natural light, and can adjoin the above group of departments by way of Household Linens and Soft Furnishings. Piece-goods consist mainly of materials bought by the yard, *i.e.*, silks, velvets, velveteens, cottons, artificial silks, woollens and worsteds, etc.; while the following accessory departments require special fittings: Cut Lace, Ribbons, Haberdashery, Art Needlework, Knitting Wool, Paper Patterns, etc.

This group of departments is affected by the seasons, in the same way as fashions are, and thus Woollens should be planned adjoining Cottons, with fixtures capable of doing service for either department.

3. "FASHIONS" can well be in a separate compartment. The Fashions departments, their appropriate Piece-goods departments and Pattern sections, if planned in close relation, can be of great service to each other. All fashion trades are best conducted on

carpeted floors; and, except for Evening Wear, Shoes and some Accessory departments, natural light is essential. In a large store this section is often duplicated by placing the inexpensive articles in a so-called "Bargain Basement," and assembling the more expensive range in showrooms or special saloons.

In practically all these departments special fittings have to be designed to take the various stocks and packings, and also to suit the changing fashions.

The expensive section includes coats, costumes, expensive millinery, furs and model gowns. The less expensive section includes similar departments to the above, and also blouses, gloves, flowers, jumpers, knitwear, maids' dresses, mackintoshes, neckwear, overalls, shoes, stockings and trimmings.

Accessory departments, which are often placed near entrances and along gangways leading to the above departments, are as follows: umbrellas, handbags, handkerchiefs, perfumery, jewellery, and the like; while dressing-gowns, woven underwear, lingerie and corsets need a little seclusion, and are better placed on a higher level alongside or beyond the departments first mentioned.

Other departments forming a part of this group are babies' requisites, children's clothes and shoes, also girls' regulation or school dresses, etc.

4. SPECIAL SALOONS consist at present chiefly of those departments and services which need seclusion, like beauty parlours, chiropody, hairdressing saloons, also woven underwear, corsets, lingerie departments, etc., alongside of which a mannequin theatre is an attraction of great value.

I believe that this side of selling in competition with small traders will certainly increase, and has recently been developed by Lewis's, of Birmingham, with an internal street of shops. An even better example can be seen in Harrods' reconstructed lingerie, corsets and millinery departments. Here a more free and larger interpretation of the same idea gives great opportunity to the architect's imagination, in outstanding contrast to the American open floor methods of business.

5. MEN'S WEAR departments may be suitably placed in the basement, where they can be conveniently isolated from the rest of the store, and be immediately accessible from the street.

In comparison to the women's section these departments can be supplied with less spacious fittings, for men's wear is almost standardised both in design and packing.

Again, fluctuations in trade, due to seasonal wear, etc., are much less pronounced, so that movement is less likely, and thus an opportunity is given for a separate scheme of decoration.

6. "FANCY AND EXTRANEOUS" is about the only heading under which many departments selling small articles can be placed. Confectionery, inexpensive jewellery, fountain-pens, beads, stationery, gifts, arts and crafts departments mainly require the illuminated

counter type of unit, and are usually to be found on the ground floor surrounding larger sections, or on other floors in conjunction with complementary departments.

Larger articles, which do not require counter fittings, such as trunks, leather goods, etc., must be included here; while books are often associated with a lending library and other service departments rather than a part of the stationery section, and require open stands and shelving.

The success of the above departments is mainly dependent on their relation to the adjoining departments and the flow of traffic, and nowhere in a store is good planning more remunerative and more necessary.

7. FOOD AND WINES, ETC., include groceries, provisions and canned goods departments, all of which are best kept separate from the main body of the store, and require good ventilation and separate despatch facilities. This section, although often found on the ground floor, can be placed quite conveniently in the basement under artificial light, and where artificial ventilation is usually available.

Snack bars, soda fountains and the like are now very popular and profitable, and can be serviceable in many parts of the store. The general catering, however, is usually concentrated on the upper floors alongside other service sections, so that the shopper can rest and eat in comfort, away from the bustle of shopping and street noises.

8. DRUGS can be placed conveniently in either of two positions, the choice of which, as in many other instances, depends mainly on the class of customer for whom the management intend to cater. The ground floor is the best place to sell patent preparations and well-advertised packet goods, in association with the toilet requisite departments.

On the other hand, qualified men giving personal supervision would be expected to be found on the upper floors in the vicinity of the general service section. Here ample opportunity would be given for designing well-lit and ventilated laboratories and dispensaries, with the possibility of erecting consulting-rooms.

9. RECREATION AND SPORTS departments divide into indoor and outdoor pastimes, the former being often placed in the stationery group, and might well be planned alongside toys, etc., while the latter are a class of their own, in which demonstrations and exhibitions are a normal feature. These departments are usually to be found near the top of the building, not only because of the availability of the floor space needed by them, but also because of their attractive qualities in enticing shoppers to the upper floors. Special display stands are required, and are often supplied by the makers of the cricket bats, tennis rackets, golf clubs, etc.

Animals and pets sections might be considered here, but are to be found in very few English stores, mainly, I believe, because the living stock requires upkeep, attendance, and some form of separation from the rest of the store, as an assurance against the leakage of

odours. Impervious walls and floors and good ventilation are essential; and the cages, aquariums, etc., all require ease of access, control and cleansing, with a fodder and straw store at hand.

10. GENERAL SERVICES, other than fur store, safe deposit and cleaning departments, are best situated on the upper floors, and include information and travel bureau, theatre tickets, post office and public 'phones, lavatories, lounge, writing-room, children's nursery, etc., and can be planned around the restaurant and fashion theatre.

Research and testing laboratories are often also required, and might well be grouped with the dispensaries in the drug department and the mixing-room of the ladies' hairdressing section.

A fur store is used mainly for the storage of customers' furs during the summer months, and need not be near to the fur department, for, although often planned in the basement, it can be placed almost anywhere where space is available. The safe deposit, however, is most economically constructed in the basement, while a cleaning department is attachable to almost any part of the fashion section.

TYPES OF CASES AND STANDS IN RELATION TO THE LAYOUT

WALL FITTINGS, in whatever form, always give a greater stock-carrying capacity than similar fittings in other positions. The reason for this is twofold: firstly, the units can be as high as the room; and, secondly, no interruption occurs in the length of the units for gangways, etc., apart from access to show-windows, or stock-rooms, and in some instances lifts and staircases.

Where wall fittings go to the full height of the room, as on fire division walls, above the reachable height, it is common practice to incorporate illuminated show-cases, or where space is in great demand, reserve stock can be stored here, but it is usually very unsightly and difficult to control in this position. The objection to high fittings is often not so great in a shoe department, where either ladders or a mezzanine floor can be used.

Where wall fittings are only required for current purposes, 7 ft. can be taken as a standard reasonable height to which most shop-fitters work. This height makes steps, etc., unnecessary, and usually leaves sufficient space between fitting and ceiling for dressing out, i.e., the draping of materials, or the use of stands for fancy goods, and will also allow light to be borrowed through the backs of show-windows.

The space between the top of these 7-ft. fittings and the ceilings is a convenient one for artificial ventilation trunks, drainage, sprinkler mains, etc., and when so used can be enclosed flush with the main face of the fittings.

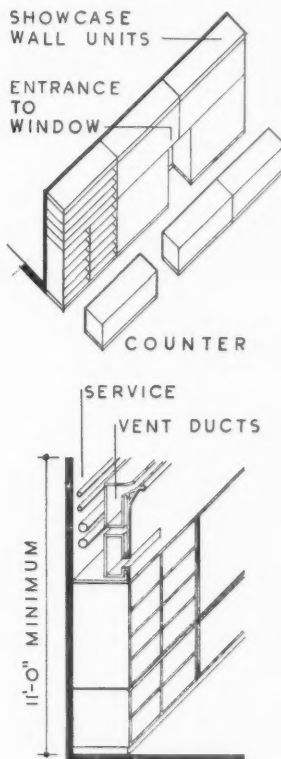
While the general exterior window area grows, so the wall units diminish in number, or height, and where the show window backs are utilised for other purposes, such as specimen rooms, etc., the number of these units is even less.

ISLAND FITTINGS are usually placed back to back, and are not more than 4 ft. 9 in. high, chiefly for the purpose of visibility, and so, although easily movable, are of less stock-carrying capacity than wall fittings. These fittings, besides being of service in the centre of open showrooms, are most useful under exterior windows, where their tops are of great display value, viewed both from within and without the store.

In England natural light is considered an essential to fashion showrooms, and thus with modern methods of construction the windows are developing into continuous ones around the perimeter of the building; consequently wall space grows less, and island fittings become more common.

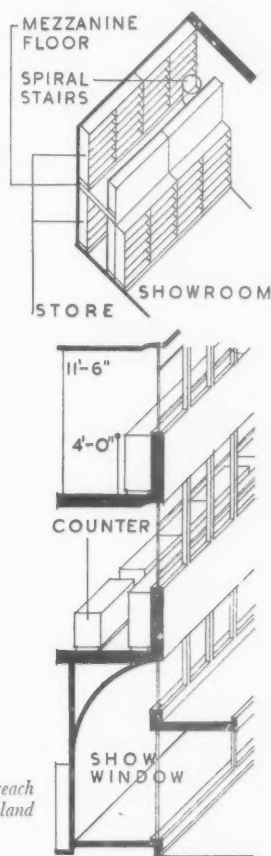
The fluctuation of departments being a constant process, it is a valuable asset to have low fittings in

Below: Wall units having space above reachable height shown put to good use

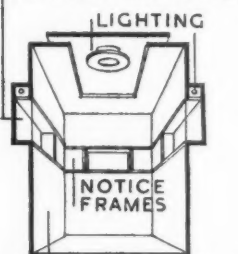


Left: Space which is out of reach used for services. Right: Island units below external windows

Below: Full use made of ground floor height as stock rooms in a shoe department

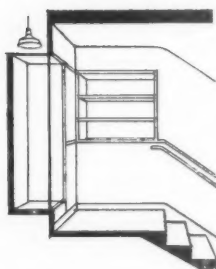


SHOWCASES ARRANGED BETWEEN LIFT GUIDES

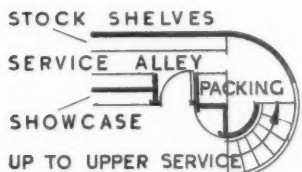


DURABLE MATERIAL

Lifts have selling value



Wall space used to advantage



The right use of panelling



Hidden access—a common fault



Showcases for small stock should not be in large clusters in gangways

abundance, for they do not require either mechanical or skilled labour to move them.

DISPLAY CASES, or enclosed storage cabinets, take many forms, and are designed to suit many purposes, among which are wall fittings and back fittings, but the most common is the illuminated counter.

The advantages of enclosed show-cases are, I believe, obvious, for in them valuable goods can be displayed without fear of loss, or goods can be shown in places where attendance is not possible, as on staircases, in arcades, etc.

Where it is desired to exhibit stock without fear of handling or soiling, as in lifts, or store stock in places inaccessible to dusting, as on the top of wall fittings, these enclosed cases are indispensable.

Valuable articles are to be found in display cases, and consequently articles placed in these cases are inclined to gain value in the public's mind. Upon this fact many special stores and saloons have built their trade. All articles are shown in display cases, while the main stock is carried in adjoining rooms, or galleries.

Showcases are often used as architectural features, but I doubt whether, when so treated, they are very efficient in serving the purpose of displaying merchandise, except

perhaps in small rooms, for they draw attention to themselves rather than to the goods within them. Many cases of this kind do more harm than good, by hiding means of access, doors, staircases, lifts, etc., or by widening and making more obstructive the columns they stand against, or enclose and pretend to mask.

HANGING CASES in most instances have to be capable of holding full length or two tiers of half length gowns and coats, so a height of 6 ft. to 7 ft. is usual. These cases are, therefore, often objectionable if placed in the centre of an otherwise open showroom, and have in the past been placed around the walls or in bays, to form separate departments. Fitting rooms are nearly always required in conjunction with hanging cases, which can, with advantage, be so arranged as to form the sides of them.

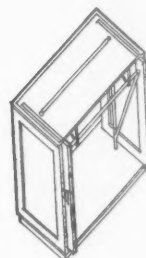
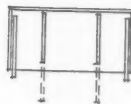
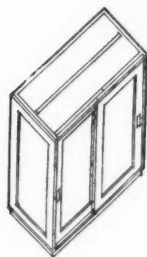
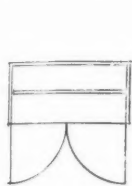
In new buildings where wall space is comparatively small and good perimeter light is obtainable, the cases are best placed back to back and at right angles to the outer walls, or sources of light. Customers by this means can see the garments to advantage without casting their own shadows upon them; a certain amount of privacy is also given to each bay so formed.

There are three types of mechanical apparatus for these cases, known as the "Taylorac," "Glidorac," and patent Pull-out Rack. The "Taylorac" holds 50 garments in two rows side by side, and can be drawn out of the case and revolved for inspection. The "Glidorac" and Pull-out Rack can also be drawn forward after the disappearing doors have been opened. The former is composed of a rail parallel to the case, while the latter is a series of rails at right angles to the case. All the above machines can be constructed to carry twice as many half coats or jackets, by the addition of an extra tier of rails, and their value lies in the fact that they combine the advantages of a closed case and a double hanging rail.

COUNTERS designed on traditional lines in wood are very difficult to improve upon when hard service is the main requirement, as for example in piece-goods departments. Glass showcase counters fitted with shelves or trays and sliding access doors are, however, very much more efficient and attractive when display is the chief consideration, and are to be found in abundance on the ground floor of most stores.

Counters are chiefly to help the assistant in showing merchandise to customers in a convenient and attractive manner, for measuring, packing, and the resting of goods thereon. The above requirements could and often are met by a table, but since the days when apprentices slept behind the counter, it has been found both convenient and useful to fill in the front and utilise the space thus formed.

This space is one of the remaining few in a department not seen by the customer and, in consequence, does still often hide social evils due to the average



Above: Swing doors are not subject to mechanical defects but need space. Right: Sliding doors are not dustproof and only half can open

Above, left: Disappearing doors are efficient but reduce capacity. Above, right: Pull-out racks give good access but display only two garments. Right: Hinged rails give both access and display value

mentality, which thinks that rubbish out of sight is as good as tidied away. That this space has value for the storage of stock there is no doubt, and in suburban stores packing materials, or parcels awaiting collection, etc., can be placed here. The misuse of this space can, however, be avoided in departments like soft furnishing, by dividing the counter into sections, similar to stock fittings, and not constructing a front thereon, but this is not advisable where delicate materials are sold, for they can easily be soiled by the customers.

In an American example, where only small articles are stored below the counter, all possible waste space is eliminated by diminishing the body of the counter, and cantilevering the top to form knee space below for customers when seated, and so virtually gaining width in the main gangways.

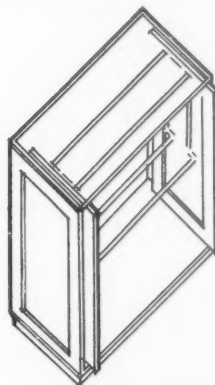
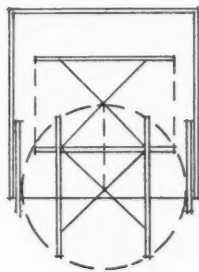
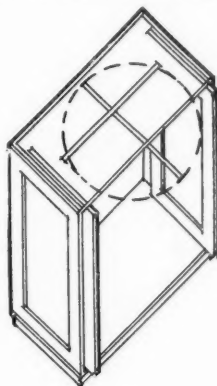
A German store has square section counters fixed clear of the floor on metal stilts or columns. This facilitates cleaning and eliminates the need for assistants to bend and exposes the portion of floor usually unseen by customers—the two main causes of untidiness.

Damage to counter fronts through kicking is also not possible in this store, a fact often overlooked, although damage attributable to kicking is sometimes considerable. I know of a department where continuous marks are to be found on all the light oak counters a foot from the floor, due mainly to "city matchers" (girls employed by dressmakers and cloth firms to match material out of stock) sitting on the counters and swinging their legs.

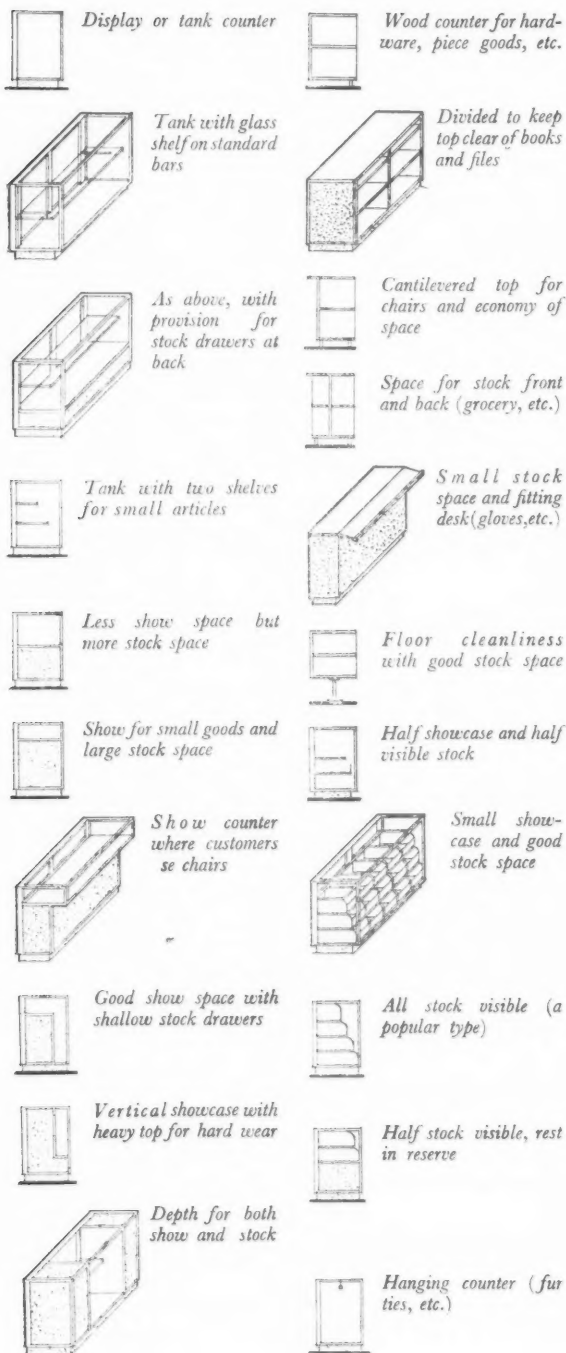
Many old counters are very long, having been built on the site. One example, recently broken up, measured 32 ft. long.

New counters, like fittings, should be easily movable, preferably in units about 6 ft. long, and fitted with adjustment in their feet and base to take up floor unevenness or slope. (Selfridge's ground floor runs parallel to Oxford Street and falls 5 ft. in its entire length.)

There are two other types of counters, the well known "help yourself," or bargain or wall counter, and a



Left: A single revolving rack gives service but is expensive. Centre: A double revolving rack gives access and greater capacity per unit length of wall space. Right: Another form of pull-out rack which gives display and service



perfumery or jewellery counter, the latter consisting of a low table with flat glass display case forming the top.

TABLES AND DISPLAY STANDS are mainly large areas of plain surface at levels suitable to the merchandise, which give scope to display, and are, therefore, an important aid to selling.

In wide gangways with counter trade on either side, centre tables from 10 in. high upwards, are most effective, and at sale time, bargain or self-service counters are often formed by the addition of suitably divided trays to the top of these display tables.

China, Glass, Lampshade departments, and the like, require practically the whole of their stocks to be visible to the customers, and in practice this has been best fulfilled by the use of tiered or stepped tables, with a pot board and shelf below.

Pattern and oriental carpets, if in quantity lying flat, should be placed on tables 10 in. to 12 in. high, commonly termed pot boards, which should be fitted with rubber-tyred wheels so that movement is possible, and the carpets protected from floor dust and washings.

Blanket Bins, owing to their depth, have in the past often been unsightly, but by replacing open shelves with large enclosed single drawers about 3 ft. high, and placing these in the centre of the Bedding section, they form an admirable display area for dressing out, and eliminate the need for tables.

There is a variety of special display stands required for proprietary articles like paper patterns, sports goods, umbrellas, silk cottons, etc., but these are often supplied with the goods.

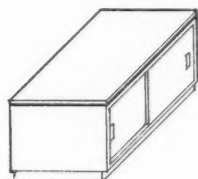
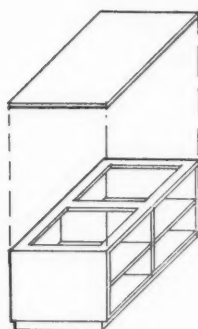
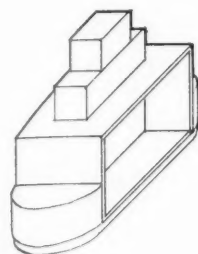
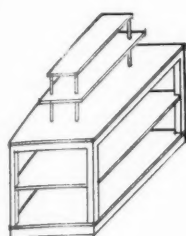
Nowhere in a store are special stands more needed, and of necessity more varied than in the Ironmongery section, where the merchandise is capable of looking well or unsightly, according to its arrangement.

COLUMN SURROUNDS in the main depend upon the building finish, access, etc., and should be unnecessary in counter trade sections. Where columns unavoidably come in gangways they should not be made more objectionable by unnecessary padding, and need only be faced with a durable hardwearing material to a height of 7 ft.

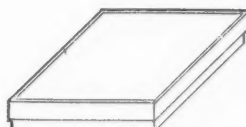
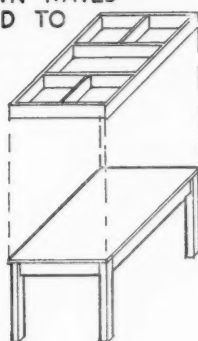
When space is available, and circumstances are favourable, as in the majority of China and Glass departments, or Gown showrooms, the most useful form for column showcases and pot boards to take is semi-circular or oblong, placed against the columns so that they can be moved like other fittings, and at sale time be replaced by similar shaped tables, stands or shelves.

In piece-goods departments, or where fur skins are sold, rails surrounding the head of columns are not only most useful for drapings, but more attractive than traditional capitals.

In fashion sections columns are often the only surfaces



BARGAIN RAILS DIVIDED TO SUIT STOCK



Top (left to right): A typical china and glass display table. A stock table or base of a unit, with a table top. A display table with bargain rails, divided to suit stock. Below (left to right): A china and glass stand developed from the one above. A display table with cupboard below for stock. A carpet-display platform on wheels

on which mirrors can be placed, and these serve both as selling assets and thief detectors.

For reasons of space, the chapter entitled "Types of Cases and Stands in Relation to their Uses" has been omitted here. It deals in great detail with the special fittings required both for storage and display of the great variety of goods sold in a departmental store. These are classified first under departments and then under the names of the articles and subheaded again under "counters," "showcases," "wall units," etc. The chapter is lengthy and copiously illustrated with sketches of fittings.

GENERAL FITTINGS

FITTING ROOMS for customers to try on garments in private must be well ventilated, heated and lit, the latter being natural, except in evening wear departments, where daylight should be excluded.

The size of these rooms should be calculated from the greatest tax likely to be placed on them, which, in the case of women's departments, occurs when a showroom assistant accompanies a customer, with friend and perhaps a pet dog, to be measured by a workroom fitter. Four persons should, therefore, be able to enter the fitting room of the more expensive women's sections, with sufficient space available for reasonable movement, the size usually adopted being approximately a seven-foot cube.

A triple mirror with wings hinged, or permanently set at an angle of 60 or 70 degrees, fixed to the rear

wall, is usual, preferably with some form of heating below to prevent condensation, and a swivel lighting trough of non-glare type over, to shine on to the customer.

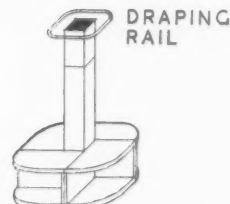
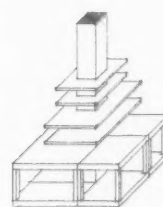
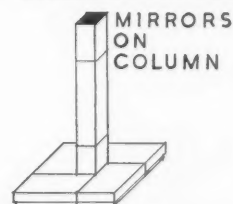
To complete the equipment of these rooms a comfortable chair, and low table or shelf, fitted with pin tray, for handbags, should be supplied, the floor should be carpeted and the door fitted with light signal, indicator bolt, or falling butts, while showcases and advertisement frames are valuable adjuncts.

For wedding and Court dresses with trains, it is necessary to have a large fitting room available, and this is most serviceable if constructed with collapsible screens, which can be used to convert the room into three standard fitting rooms for general use.

RAILS FOR DRAPING MATERIALS

DURABLE FINISH

FLOOR MATERIAL



Column surrounds. Top left: Rails for drapings are more useful and possibly more suitable than traditional capitals. Top right: A sectional tiered stand round a column. Bottom left: Column display boards. Bottom right: Column display tables

CASH DESKS to be generally serviceable should be capable of holding two girls, but, in any case, two lockable tills must be incorporated, so that relief cashiers can be made responsible for their own money, and not have access to the relieved cashiers' takings.

To avoid mistakes the tills should be divided to hold all current coins in separate divisions, with rounded bottoms (not oak) for the convenience of removing coins. The notes sections require spring clips.

Drawer type tills are not good, for they are heavy and awkward to open when full, an action which is unnecessary and wasteful of space. A folding lid with fixed till is most convenient, for when closed it can be easily locked and serve as counter for receipting sales checks. Shelves or spikes are also required for filing of the check duplicates, while a pigeon-hole is useful for the cashiers' small personal belongings. Two lockable access doors are required, if the desk is a mobile one that might be used in many positions.

An oblong shape is in common use for a one-drawer desk, but is not a suitable shape where two drawers are required. The most functional plan for these is pentagonal or square, with a corner or corners rounded off.

Protection must be afforded against "bag snatchers" and draughts, so that the desk requires completely surrounding to a height of at least 5 ft., preferably in glass, in order that the cashier can be of use in detecting pilfering. Ventilation of these desks, if completely enclosed, is a real problem, but, provided this is not overlooked at the outset, a little thought will obviate trouble.

PACKING BENCHES are important factors in the efficient completing of sales, and therefore need careful placing to save the assistants' time. Although these benches serve many purposes, in most stores they take the form of tables with drawers below for holding paper, string, bags, etc.

To avoid untidiness these benches can be placed in alcoves, or rooms adjoining the department, while in the case of counter trade they often form part of a wall fitting, or counter. Cash registers, or pneumatic tube stations are often incorporated into the benches, when their careful planning becomes even more imperative.

HANGING RAILS or mantle rails of the past were usually few in number, and constructed mainly of wood with brass or bronze rails, used in conjunction with hanging cases of ornate character, and were about 6 ft. long and 6 ft. high.

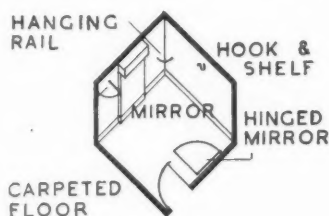
In many fashion showrooms of to-day semi-self service is encouraged, and mobility of stock is very valuable so that one-piece cellulosed metal frames, generally 5 ft. long and 5 or 6 ft. high, fitted with nickel-plated rail, and ball-bearing castors, have become very popular. Circular hanging rails are not uncommon, and are usually 3 ft. in diameter, finished to match the standard straight rails.

Skirt racks are also similarly treated, but instead of a rail, metal springs radiating from the centre, petal shaped in the form of a sunflower, grip the waistband of each skirt separately.

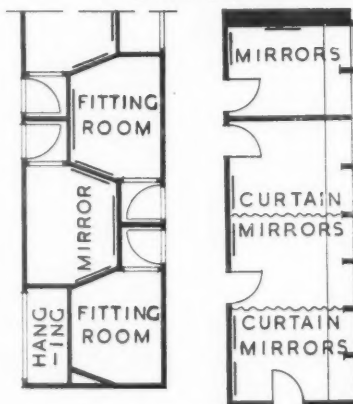
CHAIRS AND SETTEES depend considerably for their character upon the general treatment of the showrooms, and should be abundant in special saloons. There are five main types of chairs required in the equipping of a store and are as follows: (1) Piece-goods or counter type; (2) showroom and saloon; (3) shoe department; (4) buyers' or office chairs; (5) assistants' seats.

Piece-goods chairs should match the counters, be serviceable, and not too comfortable; a good bentwood type is often preferred. Showroom chairs, on the other hand, need to be low, and as comfortable as possible, forming a part of the decorative scheme, and augmented in larger rooms with settees to match, upholstered in a natural or monotone fabric that does not show dirt too readily. Armchairs are often preferred in a shoe department, and should be upholstered in a hard wearing material such as hide or moquette, with trying-on stools to match.

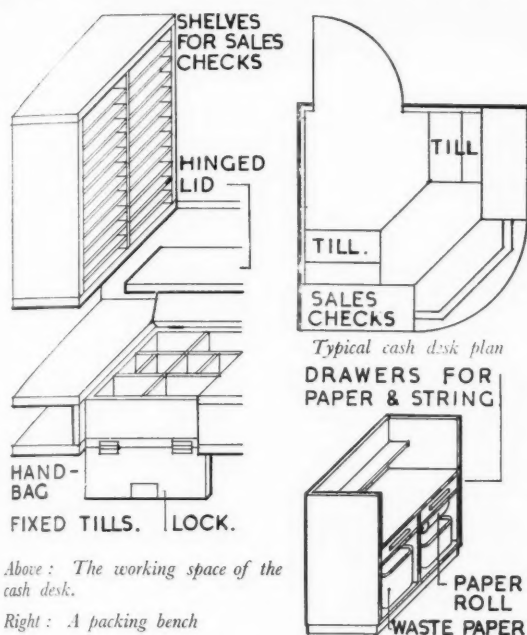
Buyers are usually supplied with desks adjoining their department, and an office type chair is required to go with these, and to equip sanction desks, cash-desks, and the like. The Shops Act requires that female assistants, who usually outnumber the men by four to one, be supplied with one seat to three persons, and these are often constructed as tip-up seats attached to counters, so that space is not wasted when not in use. Besides



Fitting room equipment



Left: Typical fitting room layout.
Right: A set of convertible fitting rooms
for Court gowns and wedding dresses



Above: The working space of the cash desk.

Right: A packing bench

the foregoing types of seats, restaurants and rest rooms have their particular requirements which do not require description.

Two short sections on Miscellaneous Equipment and Special Saloons, etc., are omitted. The former contains a list of the small movable equipment required in a store, the latter deals with hairdressing saloons, chiropractic rooms, restaurants, fashion theatres, audition rooms, etc.

THE EFFECT OF SERVICES

HEATING or warmth is conducive to courteous and speedy service, and the position of steam or hot water radiators must usually be considered in relation to shop-fitting. For most efficient heating the radiators are placed below windows, alongside doorways and staircases, also in coils adjoining walls below roof lights and in fitting rooms.

"Rayrads" are probably the best form of radiator to use below continuous windows, for they cause a warm current of air to rise and compensate for heat loss, and also by means of a neat sheet metal front radi-

ate heat into the room, but to facilitate this, no fitting should be placed within 5 ft. of them.

In departments where the whole wall surface is occupied by fittings, the best position for radiators of appropriate length is at the end of counters, which have insulated tops constructed to overhang them. Where counters and fittings stand free of the floor, heating coils can be conveniently fixed below them. Plenum and panel systems are built in the structure, and so do not effect the shop-fitter extensively.

VENTILATION, if natural, should be easily controllable, with windows that open and do not obstruct the working or use of blinds and curtains. Artificial ventilation is necessary in many parts of the store, and the distribution trunks are usually carried between floor and false ceilings, or suspended below the ceiling.

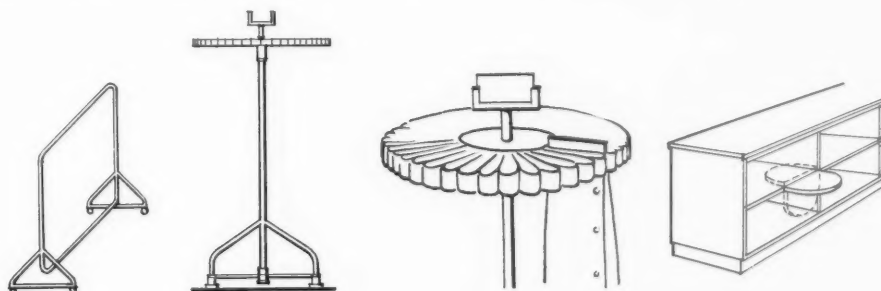
In the former case outlets will be in the floor throughout the sales area, and must be planned to come below or through grilles on the face of fittings, while in the latter case, the trunks are best arranged over the wall fittings so that they can conveniently be enclosed. The rising trunks need careful planning, and are best contained in the otherwise wasted space where fittings meet at the corners of rooms.

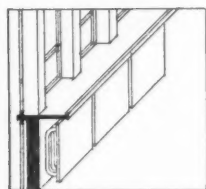
ELECTRIC WIRING and connections are required in great number for showcase illumination, which should be of greater intensity than the general lighting, and be produced by concealed elements in reflectors.

Power points are required for vacuum cleaning and other apparatus, also for demonstrations held in ironmongery sections, and the special lighting required in electrical, china and glass departments, etc. A power and lighting point at the base of each column, and a junction box under the floor of each island is advisable throughout the store. Telephones, electric clocks, etc., should also be planned with the fixtures, so that the wiring can be installed during construction.

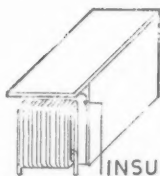
It is possible to light the store indirectly from enclosed elements at the top of cases in the manner of the R.I.B.A.

Left to right: Standard hanging rail. Skirt stand. Spring to grip skirt bands. A spring-hinged seat for assistants.

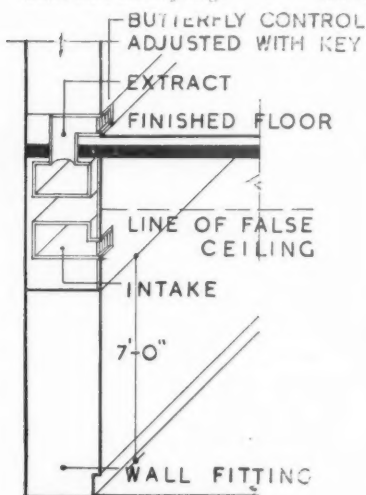




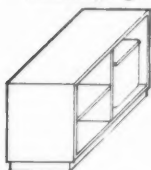
Radiators below windows where there are no fittings



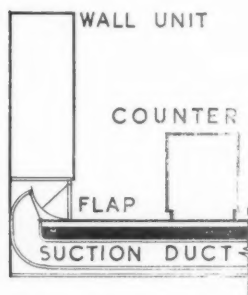
Radiators at counter end—a last resort



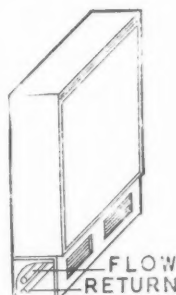
Ventilating ducts in space above reachable height



Counter for waste basket



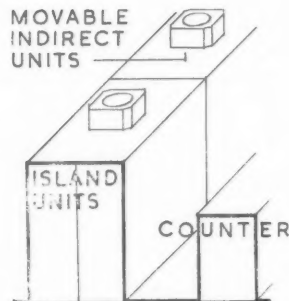
Mechanical waste disposal



Use of waste space



Trough lighting for displays



Movable indirect light units on the tops of fittings

Library, but the elements should be movable and sit on the fittings and not be a part of them.

CASH TUBES emanate in pairs at each cash stand, one the flow and the other the return pipe. These stands are permanent whatever the layout, for the tubes are so numerous and limited in radius at changes of direction that they must be carefully planned and built-in at the outset.

BELT CONVEYORS AND PARCEL SHOOTS are commonly employed in large stores for the automatic conveying of goods to dispatch docks. The conveyors are endless belts attached to the basement and sub-basement ceilings, on to which parcels are dropped through trap-doors from the floor above, which must be placed where most serviceable and least obstructive.

Parcel shoots are more commonly used to serve the upper floors, and grouped with goods lifts and staff staircases, discharging into the despatch dock, or on to the belt conveyors, and only effect fittings in so far as a suitable space must be left for the doors and access thereto.

VACUUM PLANT of the Sturtevant or Lampson type is sometimes installed in the form of tubes, similar to those used for cash service. These tubes are concealed, but their points of delivery require consideration. The usual place for good service is alongside staircases, where fittings are not often affected.

WASTE DISPOSAL is often performed by waste baskets in which paper rubbish is collected, and in consequence the floor behind counters is very untidy towards the end of each day. These baskets take up space either in the fixtures or counter, which may be saved if rubbish shoots are planned alongside the parcel shoots, or lifts.

Waste paper may be disposed of by the use of vacuum tubes, and, I imagine, it would be possible to design plant to serve the dual purpose of waste disposal during the day, and carpet cleaning in the mornings, and evenings.

METHODS AND MATERIALS OF CONSTRUCTION

GENERAL EQUIPMENT is commonly constructed of hardwood, with occasional marble plinths, while bronze showcase counters 6 ft. by 2 ft. by 3 ft. are standard articles, commonly termed tank cases.

When choosing materials for fittings, four main considerations must be borne in mind.

1. Suitability to purpose.
2. Wearing qualities.
3. Texture.
4. Colour.

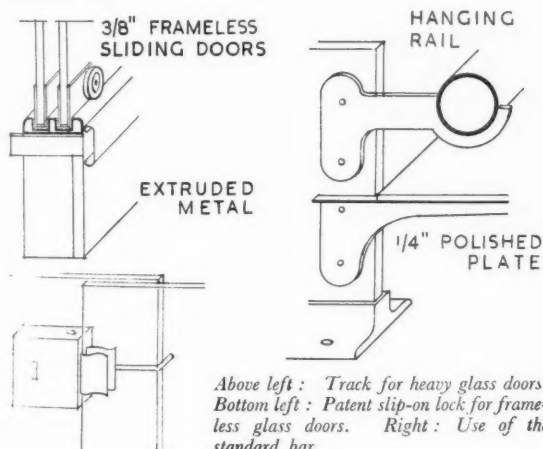
Materials which are suitable for one department are often not the best possible in another. Hard usage should always be expected, when bearing in mind the continuous movement and use to which the fittings are subjected.

Texture is often more important than is realised, for a cold glass counter top may be quite good when selling a bottle of scent, or fountain pen, but it will not be satisfactory where warmth needs to be given to fabrics. Colour is the most difficult choice of all, for it must be bright and cheerful and also subordinate to the merchandise, which often varies considerably in tone value.

It is because of all the above considerations, as well as the ease of working, that mahogany, oak, walnut, birch and occasionally sycamore have been so often used in the construction of cases in the past. Of these woods mahogany and oak are the most common; the latter being open grained and light in colour is extremely adaptable for finishing in almost any colour or tone, while its durability cannot be questioned. Well-seasoned hardwoods are not easy to obtain, and thus plys are being more and more used, and if handled in an appropriate way call for a new form of structural design.

Bronze to some extent is giving way to stainless steel, or cellulosed metals, which are very good when used in conjunction with glass for show and hanging cases, or special saloons. The counters require a base that will not mark by kicking, or the cleaning of the floor. Probably the best material to use here is that used on the main floor itself, except in the case of carpet. Carefully chosen plain linoleum for counter tops can add tremendously to the showroom's appearance.

Beige, grey, or other neutral coloured felt on the floor of hanging cases saves hardwood bottoms, and, with simple textured material, or wallpaper on the walls and ceiling of the cases, forms an excellent background to any coat or gown. Mirror linings to hanging cases are quite good where warm textured coats are stored, and help considerably the atmosphere of any fur department.



Above left: Track for heavy glass doors.
Bottom left: Patent slip-on lock for frameless glass doors. Right: Use of the standard bar

B*

WALL LININGS above fitting height can be plastered, for this is a suitable material for taking distemper, or matt finish paint, also pattern and form, but below 7 ft. more durable and easily cleaned material is required.

There are many possibilities here in the realms of cellulose, and plastic products, or linoleum of "X," "Thistle," "Moss," or 3rd quality. Marbles are quite useful on the lower portion of the walls, but are cold in comparison with selected woods, which, if treated as a veneer and not in panels, can still form a cheerful, clean background, hard to improve upon. Where ceramics, pottery, glass, etc., are being exhibited, a granite cloth or a string coloured material draped on the walls, probably forms the best background.

FLOOR COVERINGS vary according to the part of the store in which they are laid. They should cover the floor completely in order to facilitate moves.

Ground floors are often covered in travertine, which is durable, has a cheerful colour and easy cleaning surface, but is hard and noisy to walk on.

Cork is pleasant to the feet, but continuous polishing is essential if the surface is to be kept free of dust. Only three browns are procurable; the lighter shade wears much longer than the darker.

Polished wood floors are sometimes to be found in provincial stores, but are noisy unless carpet runners are laid in the customers' gangways. A pile carpet is tiring to stand on all day and should be avoided in assistants' gangways.

Rubber laid on wood is not very satisfactory; it often creeps, is hard to patch and is rather sticky to walk on, but any colours, plain and mottled, except bright reds and certain blues, are obtainable, also any design can be produced. If, however, the sub-floor is sound and even, and the material regularly polished it will wear well and keep in good condition.

"Poilite" rubber tiles 1 ft. square are made in pleasant mottled pastel shades, and do not appear to have many of the disadvantages of ordinary rubber, but are more costly.

Lino of extra thickness, i.e., "Lintile," is an extremely good flooring, having all the advantages of rubber; it is also much more durable, and better to walk on. Plain coloured lino tends to show dust and dirt. Where lino is laid direct on concrete, bituminous paper should be laid first; a special cement is required to fix the material if asphalt forms the base.

The thinnest linoleum advisable for ordinary traffic is that known as "A" quality, which, under normal conditions, will last from 8 to 10 years, but this material can only be produced in special colours for orders of 1,200 yards and over, at least six weeks being required for seasoning.

Carpet is essential to fashion trades, and is usually laid on underfelt; neutral tones are necessary, except perhaps in a fur or shoe department, where greens can form pleasant grounds. Grey or beige felt is the best floor covering for bedding sections, also window and showcase bottoms.

HARDWARE is produced in many forms, shapes and sizes, and in all manner of metals, that form a study in themselves, but for general use satin finish stainless steel, German silver bronze, bronze or B.M.A. (bronze metal antique) are at present difficult to improve upon. Plastic materials have, as yet, almost unexplored possibilities, while aluminium, cellulosed and coloured fittings are still difficult to find in ironmongers' stocks.

Standard tapped bars 1-1/8 in. by 1/4 in. are practically universal where adjustment is required, both for supporting 1 1/2 in. diameter rods in hanging cases, or cantilever brackets for glass and wood shelving.

Doors to hanging cases and counters can be either hinged, sliding, or sliding and disappearing, the latter types are either on runners or top hung. Bottom tracks are most common, and need careful designing, especially in conjunction with frameless glass doors. A channel section or shoe, to which are attached two or four ball-bearing wheels (not three as rocking will be produced where track is uneven) is the best method to adopt for big frameless doors.

The track should be formed in solid metal, avoiding the use of large extruded sections, for wide members shrink and the metal flies, also the great pull of stainless steel causes narrow timber sections to buckle, twists the track, and makes the opening of frameless doors either dangerous or impossible.

For our purpose one must always have in mind the following essentials governing the choice of suitable materials.

1. Durability.
2. Easy and inexpensive upkeep.
3. Ease in cleaning.
4. Noiselessness and ease of action of movable parts.
5. First cost.

FUTURE DEVELOPMENTS

PACKING OF MERCHANDISE appears to have advanced considerably in the past few years, but the standardisation of sizes still requires attention. Household linens are a particular example of this need, for many sheets, tablecloths, serviettes, etc., of identical size, are folded or packed differently, even when produced by the same manufacturer.

The purpose of this variation in size is usually to indicate quality and to avoid mistakes; but this can

be equally well done by the use of coloured packages, which, if carefully designed, would certainly add to the articles selling value and appearance, apart from helping the look of the department.

Where it is impossible to pack articles in a uniform manner, standard fixture boxes are of value. This is, at present, the general practice in shoe departments, while glazed flaps, with trays, and visible stock are the best help to uniformity, stock control, and selling, but they are not required in such variety as found in most catalogues, for shop-fitters are always adding to their "complete" range of cases. It is not until the foregoing problem has been properly tackled, and the basic units settled, that one can hope to make the fullest use of machine produced fittings.

UNIT FITTINGS are fundamentally the correct aim in standardisation, but those at present on the market are obsolete, for they make little use of plys, or laminated boards in their proper structural form in which they eliminate the need for panels, framing, cornices, false ends, and the space wasted thereby, and call for much simpler treatment than hitherto.

The controlling sizes in unit fixturing are: (a) Column spacing, or island lengths, and (b) the merchandise sizes. Thus a 20 ft. clear span can be divided into lengths for fittings, as follows:—

1—20 ft.	5—4 ft.	3—6 ft. 8 in.
2—10 ft.	10—2 ft.	6—3 ft. 4 in.
4—5 ft.		12—1 ft. 8 in.
8—2 ft. 6 in.		
16—1 ft. 3 in.		

Wall fittings can be formed by placing a 2 ft. 2 in. high unit on a 4 ft. 4 in. island fitting, which, with a 5 in. base, and 1 in. division, gives the standard reachable height of 7 ft.

These fittings can then be divided horizontally into divisions, as follows:—

3—2 ft. 2 in. high, centre to centre of division or shelf.				
6—1 ft. 1 in.	"	"	"	"
9—8 in.	"	"	"	"
12—6 1/2 in.	"	"	"	"
18—4 in.	"	"	"	"
24—3 1/4 in.	"	"	"	"

Upon the above two sets of figures, which are only typical, and should be worked out for each store, units can be simplified, minimised and fitted with apertures to suit any commodity, and also conform efficiently to the building and layout.

METAL SHELVING at present is not used extensively in English showrooms, although familiar in America. The reason for this is not easy to discover, but probably the following facts may be of help. Steel

shelving is often noisy in use, and is usually associated in one's mind with warehouses, factories, and offices. The three standard colours—olive green, mid-green and chocolate brown, I suspect, are the outcome of this supposition, and add weight to it accordingly.

The most common depths of shelving used in a store are 2 ft. 3 in. for single width materials, and 4 ft. 6 in. for double width materials. These depths do not appear in any list of standard metal shelving, presumably because shelves of this size would have to be stiffened. For example Messrs. Ronco & Co.'s standard sizes are as follows:—

Length between uprights.	Depth from back to front.	Height.
2 ft.	1 ft.	4 ft. 4 in.
3 ft.	1 ft. 3 in.	6 ft.
3 ft. 6 in.	1 ft. 6 in.	7 ft.
	2 ft.	8 ft.

Any combination of the above sizes can be obtained and shelving is adjustable to every inch of height, and can be added to as required, an extra charge being made for cutting if shelf lengths or support heights are not standard. This type of shelving is strong, durable, and clean, and is also capable of being made bright and cheerful by the application of cellulose, that should preferably be of a metallic but non-shiny appearance.

Aluminium also offers great possibilities for it is a metal which can be manufactured as hard as steel, or soft as copper, and can be cast, extruded or pressed. In addition, permanent colour can be given to the material by chemical action, or a non-destructible surface by anodising, but these processes are inclined to be costly.

MECHANICAL RACKS and metal stands are becoming quite common in the form of movable and rotary racks, and are replacing wood rails, stands, etc. Metal racks and stands are usually light, space saving, easily cleaned, and have good display qualities. One of the most recent examples of mechanical equipment is in the form of a series of fur racks running on rails, each rack propelled by an electric motor operated by push button control. By this means only two gangways are required instead of six, so that the storage capacity of coats and skins has been increased in a fixed area by 25 to 30 per cent.

Metal hanging rails have been previously mentioned, and upon the design of these have been based many pleasant forms of rotary racks for the display of soft furnishing fabrics, and carpets, known as "Rotoplax" machines.

Where photos, illustrations, or expensive fabrics, that deteriorate through handling, are to be displayed, a similar system to the above can be adopted, but with the drum mounted in a vertical position, and glazed

PORTABLE
TOP

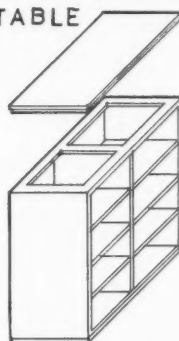
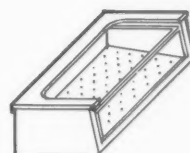
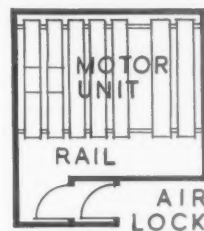
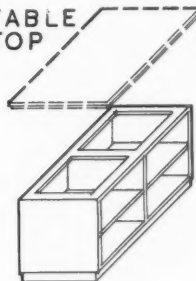


TABLE
TOP



Left: Unit fittings are an important future development, but they must be of simple design. The lowest unit serves as either base or table. Right, above: Mechanically operated moving racks save space in fur storage. Right, below: Insulated, refrigerated display case

picture frames pivoted thereto. This type of stand is known as a steel swing-wing displayer and, with a little thought, could be adapted for displaying oriental carpets, or any merchandise consisting of a flat surface. These racks are mentioned here because they are new, and embody ideas that will probably be the nucleus of many developments in display fittings and equipment of the future.

ELECTRICITY develops apace and there is no end to its possible application, not only in the illumination of cases, but also in the mechanisation of all movable parts; this is likely to increase rather than decrease.

The heating and air conditioning of certain cases will, no doubt, become common. Strip lighting at present makes many unventilated showcases too hot. Refrigerated glass showcases are the logical and hygienic requirement for all flower, provision and food departments, and would be simple to construct, if insulating glass were produced.

PLY AND BLOCK BOARDS are already being used extensively where architects are in charge of the development, reconstruction or reconditioning work, but little seems to be done towards the correct application of synthetic and fire resisting materials in this respect.

HARDWARE is a field in which research is greatly needed at the present time, for much trouble and expense could be saved if simpler, and more functional

hardware replaced the present ironmonger's ancient stocks. When, however, the possibilities of moulded ware are more fully appreciated, and the designers, fortunate enough to be handling this material at the present time, have produced suitable substitutes for many of the obsolete items of ironmongery, then we may see an improvement in the realms of furniture and fitting equipment generally. It is a great blessing that new materials are always being discovered, or invented, for good design is still only appreciated in terms of competition by many commercially minded manufacturers of to-day.

Display rather than stock-carrying capacity is resulting from the development of remote dispatch centres, depositories, and stock rooms, the outcome of improved mechanical and transport services and the general use of the telephone, combined with the tremendous growth in variety of stock which has made duplicate storage practically impossible in the store itself.

The window dresser's sphere has grown to include the whole store, and he has become the manager of display, and the consequent co-ordination of all departments is now becoming apparent.

COLOUR, which has been in the past the Cinderella of store interiors, is at last being scientifically applied in relation to the merchandise, both in upholstery, the lining and equipping of fittings, and the furniture and fittings themselves.

Cellulose will have its effect on the use of metal, while glass, mirrors, textured and grass papers, fabrics and carpets will all form part of the improved merchandise setting of the future.

IN CONCLUSION the store will tend to become more and more an exhibition of merchandise in appropriate settings, with most of the stock visible at suitable heights for inspection. Fittings will, therefore, tend to become lower, and probably stand clear of the floor, bringing smaller articles nearer the eye level, and allowing space for the inspection and admiration of larger objects.

The shop-fitter's experience and collaboration should not be ignored, but the day of his designing showrooms with no due regard to their effect on the whole or any thought—to quote Serge Chermayeff—of “scientific economy, with its inherent profit-making without sacrificing convenience, appearance and quality” has long passed.

In studying this branch of planning and design I have been struck with the many possible uses to which cloth and woven fabrics might be put, how ignorant I was of these materials, and what a little information of them, if any, is to be found in the standard books on building materials.

Another fact to which my attention has been drawn is the excellent opportunities of interior decorating that await those who wish to express their “Art in Industry.”

Mr. Stedman's Thesis can be consulted in the R.I.B.A. Reference Library



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*Etna, View from the North East*

ETNA : AN ARCHITECTONIC OUTLINE*

HOPE BAGENAL [A.]

After leaving Syracuse we travelled north, along the road just inland from the coast, and approached Etna from the south. Thus we had encircled the island. But the morning on this occasion was not clear. In fine weather the peak can be seen from Malta—white, or slow-smoking, or merging with the clouds. Ancient merchantmen standing upon the trade routes to Italy have watched it by night and by day from the earliest times, so that its records, longer than those of Vesuvius, extend back to 693 B.C. and give evidence of something like 120 eruptions. It thus accompanies the active history of man, but also it enters the history of thought. It is the source of a mythology : it exhibits conspicuously those blind natural forces which civilised men tend to ignore, but upon which we are contingent, and it remains a prime object of interest to modern science, which recognises that the number of eruptions per century is increasing. Under all aspects it is interesting, and also because it unites the three. Its mythology goes back to the battle of the gods and giants, found

in many references, according to Diodorus the subject of the lost carvings on the temple of Zeus Olympus at Girgenti. If behind this gigantomachy there is the idea of the struggle between intellect and blind large forces, then the same kind of idea is found in Homer's and in Thucydides' traditions of Odysseus and the Sicilian cyclops. Some even may see in the one-eye of Polyphemus the crater of the volcano. But to the student of environment it is not the fact that imaginative peasants and bards have made myths of these things which is surprising, but here again, as at Etna, that the myth has universal humane application. It is inescapable. In Sicily not only Demeter Kora, but beside her those uncertain male deities of the underworld are envisaged, and from the contact of the two there comes an inexhaustible fertility of idea. In like manner the fertility (noted by Cicero) of the Piana di Catania is due to the alluvium of the estuary enriched by the disintegrated lavas brought down from Etna by the river Simeto.

We crossed the Piana di Catania : the road runs straight as a die across the estuarine flats for six miles : and approaching Catania the lower slopes of Etna

* Part 2 of Mr. Bagenal's Athens Bursary Report. The first part, *Some Notes on a Sicilian Tour*, was published in the JOURNAL of 6 June 1936.

beyond became visible. Despite its situation, the city has always been a centre of wealth and activity. It is one of twenty towns round the base of the volcano and the population of the whole district is about 1,200 per square mile. This is because of the great fertility of the lowest of the three superimposed volcanic belts which constitute the exterior of the mountain. This *regione coltivata*, as it is called, where the potash yielding lavas have disintegrated longest, and where water is sufficient, yield five harvests in the year and give a luxuriant growth to vines, olives, fruit trees. This is the reason of the dense population and why Catania, though four times reached by major lava flows in historic times, has always rebuilt itself and men have multiplied again in response, not to security, but to fertility. And not only to fertility, but also to beauty: for the whole region has an exhilaration, a grandeur. And so the town points its characteristic street, the Stesicoro Etnea, like a needle towards the mountain cap, which the Italians call Mongibello, or burning hill. Catania rests, indeed, upon pre-historic lava, one bed of which can be seen under the Greek theatre. Of the four historic devastations, three streams reached the northern part of the city but the great flow of 1669 reached and occupied the southern areas. It seemed that the largest part of the city would be destroyed.

A lava stream moves, at that distance from its source, only at about a hundred feet an hour, but it is then perhaps a kilometre in width and as high as a large spoil heap. (Fig. 1.). It advances, consuming trees like tinder, entirely submerging houses, and having a great mane of smoke extending back along its coils. Then it was that the inhabitants carried the sacred veil of St. Agatha from the Duomo and extended it in supplication against the approaching lava. The miracle happened. The flow turned to the west near the Benedictine monastery and plunged into the ancient harbour, which it partly filled up and left a black cliff standing. St. Agatha's veil is recorded as having caused miraculous avertings, or arrestings, of this kind in all the chief historical eruptions from the early Christian period onwards. The saint "was cruelly put to death in the reign of Decius, A.D. 252, by the prætor Quintianus, whose dishonourable overtures she had rejected." Her relics are regarded with honour and gratitude and, at her festival in February, are carried in procession through the town by bearers in white robes.

But Catania has other great traditions also. Its university, the oldest in Sicily, owns an interesting museum of mineral and volcanic products. Men of learning have here studied the mountain, kept its



Fig. 1. Etnea. Destruction of Houses by a Lava Flow, 1929

records, and gone out from this place to the various observatories in times of danger. From the piazza in front of the university building one can look up the Via Siesicoro Etnea and in imagination see a procession of enquirers drawn onwards, moved by love of knowledge: Pindar, Cicero, Strabo, the Emperor Hadrian, Recupero, Henschel, Sir Charles Lyell. And, first, Empedocles himself. Empedocles was an enemy of the sophists. He was philosopher, scientist, engineer, medical practitioner. He had run through all thought and all experience and found at last that he was most in sympathy, after all, with the fires of Etna, with certain passionate incertitudes. Although he had spent his intellect against them, he had always loved and been moved by them. They attracted him. And so he mounted his mule and rode up 3,000 metres out of the Greek city to his house of observation, the site of which is said to be marked by the mound of ash known as the Torre di Filosofo. Then, leaving this, he proceeded upwards towards the central crater. One watches him with interest. Hellenic culture often produced these terrible old men who carried both the capacity for experience and a hungry intellect far into old age.

"A living man no more Empedocles

Nothing but a devouring flame of thought." †

He goes before our eyes, beyond the forest belt, across that *regione deserta* black, yet glittering, picking his way between the fumarolles, skirting the fissures, towards the centre crater. Descending the crater he left a shoe on its floor and plunged into the abyss.

He had "sophisticated no truth, nursed no delusion, allow'd no fear." One sees, in this mineral theatre, the intellect of man likewise a passion—part of some great critical reservoir and not far from its heart. But let us for a moment set Empedocles side by side with those other great and familiar minds of antiquity, the builders of the temples—the builders of Segesta. The magnificent durability of Segesta, both in fact and in mind, seems to stand against this act of Empedocles, seems to complement it. He is an ultimate analysis: they a synthesis—a deliberate imposed enduring pattern. Thus in a typically Sicilian and theatrical manner one sees the two poles of human desire.

But modern scientists have not yet plunged into the abyss, however they may be nearing it, and they have, meanwhile, analysed the volcanic edifice and given a marvellous picture of its structure and development. ‡ On a substratum of very hard rock, Permian in age (to which belong the Peloritani range of hills in the extreme north), there lie unconformably the later Jurassic and Tertiary formations, forming a large part of north-eastern Sicily and the Calabrian peninsula.

† This and the following quotation is from Matthew Arnold's *Empedocles on Etna*.

‡ In what follows, full acknowledgment must be made to Dr. Du Riche Preller and his work on Italian Mountain Geology, Part III., also to Lyell's *Principles of Geology*, Vol. II. The writer of this outline has not visited the crater nor the Valle del Bove.

These later much-folded formations are insufficiently settled on the harder rocks beneath them and their frequent earth movements in the neighbourhood of the Straits of Messina cause the disastrous earthquakes, but have no connection with the volcanic shocks of Etna. Hence, Catania is really less dangerously situated than Messina. Etna itself stands in a subsidence bay of the Ionian sea, the floor of which consisted then of Pliocene marine marl known as "creta," into which originally dipped the sedimentary rocks, such as Maletto sandstone now seen on the landward side of the base of the volcano and forming the opposite slope, and divide, of the valleys of the upper Simeto and Alcantara.

The ancient Etnean bay must have been somewhat larger than the present elliptical base of the mountain, and was the seat of earlier submarine volcanic activity before the creta floor began to rise above sea level. This earlier activity is represented by large basalt masses near the existing coast line, such as the Motta St. Anastasia, now crowned by an ancient church, and the Rock of Paterno, a great basalt column carrying a Norman tower. The Cyclopean Islands near Aci Reale, much worn by the waves, and once hurled at Odysseus by Polyphemus, are also basalt of this earlier eruptive period. The later sub-aerial eruptions gradually built up the present volcanic edifice upon the creta floor, which had itself risen to a height of 200 metres above sea-level and thus forms a kind of podium to the mountain. The edifice itself can be described as in three parts. First, a lower belt of older ejected material rising gently to a height of about 2,000 metres and surrounding the base of the central cone. Secondly, the massif of the central cone itself, rising above that level roughly a height of another 900 metres to the plateau known as the Pian del Lago, upon which lesser cones are distributed. And thirdly, the more recent central ash cone rising from the 2,900-metre level to the rim of the main crater, which stands at present roughly at a height of 3,300 metres, or 10,700 ft. above sea level. In the grey cirque of the Valle del Bove—a huge ancient crater opening outwards on to the eastern slopes and extending downwards—the structure of the mountain can be studied as a series of superimposed lavas, tufas and conglomerates extending downwards for 2,000 metres. But the central chimney must go far below these: fragments of sandstone and other sedimentary rocks ejected prove that it must pass down through the "creta" and the underlying sandstone.

The gradual piling up of this great cloak of relatively soft material has been accompanied by a shifting of the eruptive axis from east to west. The Valle del Bove was perhaps the original centre of eruption at a level much lower. This appears to have been followed by the eccentric cone known as the Trifoglietto, and these two have a parallel at the existing higher level in the older elliptical cone and the present active crater circular in shape. The existing central crater, built

up of ash, lapilli and scoriæ, has in the past exhibited two openings on its floor about 450 metres below the rim. But it is always subject to alteration: at present there is one abyss.

Etna is not a single volcanic unit like Vesuvius. Lyell believed that it had originally two centres of eruption, the existing Etnean cone and the Valle del Bove. The central cone appears now to be more in the nature of a safety valve for the steam, gas and pulverised material, while the fluid magma continually finds its way out along radial fissures emerging at the lower levels. Hence the 200 lower parasitic cones. Recent paroxysms are characterised both by the marked "umbrella" or "pine cloud" eruption from the central cone and by the lava escaping from cones and fissures at a lower level. But in the older historical eruptions lava was vomited from both centre crater and parasitic craters. The whole mountain appears to be rent by fissures of all ages from the Valle del Bove onwards, all radiating from a centre of eruption, and often connecting two centres. Lava shows a tendency to follow old fissures, many of which may be of great depth, until such fissures are plugged by former flows; the new lava, issuing then at a temperature of 1,000 degrees C., either overflows and continues its course, or becomes viscous and tends to form the frequent mounds, or *bocche*, along the fissure. In 1923 a group of new and lively craters, called by common consent the Monte Mussolini, on the north-east side began to function and sent forth a lava stream which reached the railway.

Dr. Preller discusses the depth of the magmatic reservoir below the surface briefly as follows. The mean of the five largest lava flows of the nineteenth century is computed at 125 million cubic metres. The mean diameter of the central chimney can be given roughly as 200 metres. Then the height of a column of lava cylindrical in form, of that diameter and cubic content, would be about 4,000 metres. Taking 3,000 metres as roughly representing the height of the volcano itself, the remaining 1,000 metres probably represents the thickness of the sedimentary rock platform on which it stands. From the evidence given by Etna, Dr. Preller thinks it probable "that volcanoes are directly fed, not from a deep-seated, continuous fluid zone, but from independent reservoirs which lie in great cavities of the earth's crust at moderate depths below the surface" (op. cit. p. 157).

But the explosive force necessary to raise a column of lava, even from the "moderate depth" of 4,000 metres, is enormous: and on this problem, too, Etna gives some interesting illustrative data. It is noticeable that major eruptions do not occur in summer, but in the wetter seasons of the year. Also, Etna does not shed its water like Vesuvius, down radial ravines, but absorbs it. Its gullies, or *fumare*, are generally dry; its fissures often communicate with large caves and grottoes below ground. At the same time the mountain,

standing alone and carrying its great snow cap to a height of 3,300 metres above a warm expanse of sea, causes considerable atmospheric precipitation. Besides the snow, it has an annual rainfall of 32 ins. Yet, of the great quantity of water deposited, only an insignificant amount escapes at the lower levels, where the "creta" underlies the volcanic strata, in the form of a few very short rivers like the Acis at Aci Reale and the Amenano, which rises under the Greek theatre in Catania and flows for a course of scarcely 500 metres. In addition, there are a number of springs on the lowest slopes carefully tended for purposes of cultivation. Where, then, does the great bulk of the water flow to and where does it accumulate? It must find its way down through innumerable old fissures to lower levels, where it may (i) vaporise and combine with other gases more or less continuously until a certain pressure is reached, or (ii) accumulate until it is tapped by rising molten magma in a relatively confined space. Whatever the exact mechanics may be, steam appears to play a considerable part. Significant accidents often occur on the surface of the mountain. The snow is purposely accumulated by the inhabitants in large hollows and pits, and is then covered with brush and ashes to preserve it through the summer for use as ice. Occasionally a red hot lava stream, flowing downwards on the surface, plunges into one of these *tacche di neve*, when an explosion occurs like the opening of a new crater. On the summit a continual duel between fire and water goes forward at all seasons. In winter glaciers form on the crater walls, and rain falls and snow accumulates on the floor of the crater. All this must drain continually into the abyss and radiating fissures.

The formation in 1669 of the Monte Rosso, a volcano on a volcano, may constitute with its double eruptive axis a microcosm of Etna itself. It is described from contemporary accounts by Alessi in his *History of the Eruption of Etna*, and verified and quoted by Lyell. The town of Nicolosi, which has often altered its site like a camp owing to eruptions, was in that year levelled to the ground by a severe earth shock, accompanied by a high-pressure discharge of gases from the summit cone, which considerably lowered its level. Then two craters opened just north-west of Nicolosi and began discharging fiercely, ultimately forming the double-horned cone of Monte Rosso. At the same time a fissure opened on the Pian del Lago, which ran up to within a mile of the summit and which emitted a bright light. This appears to be the record of the actual formation of one of the porphyry dikes intersecting the older rocks, which are characteristic of the mountain. Meanwhile, the discharge of lava from the new Monte Rosso overran the whole of the southern slopes, including some fourteen towns and villages, melted down a minor cone called Monpileri, and, having altered the whole southern configuration of the mountain, approached the walls of Catania. These



Fig. 2. Etna. View of the Peak from the New Road

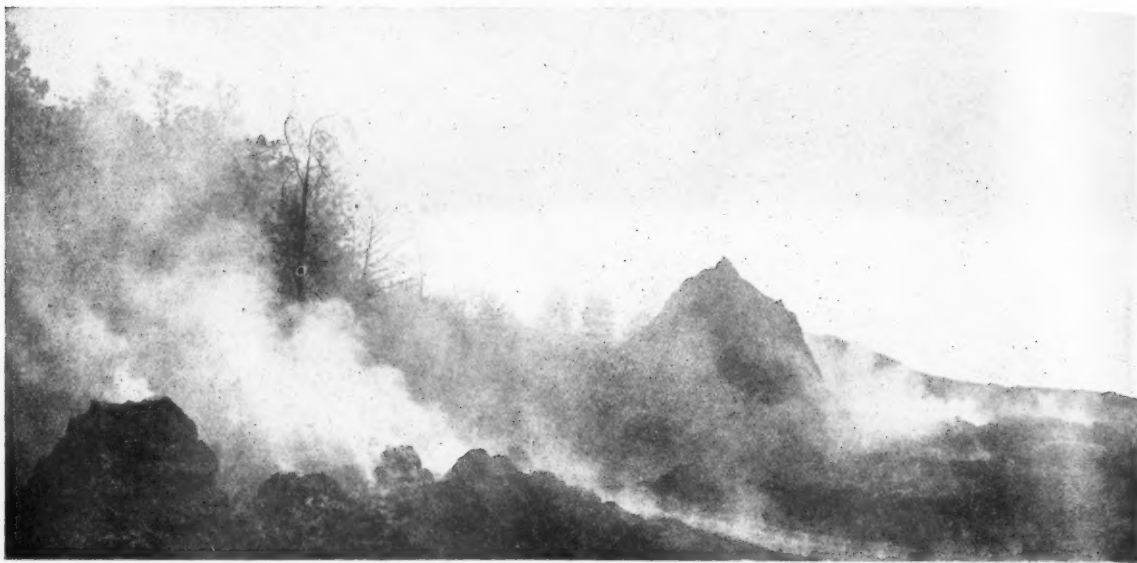


Fig. 3. Etna. A Subsidiary Cone. Eruption of 1928

walls had been purposely raised to protect the city and offered a rampart 60 ft. high to the advancing magma. The flood was held up, and a dreadful siege ensued. The pressure upon the walls must have been enormous: they held, but were scaled by the slow piling up of the lava, which in a few days buried them and moved on to the southern part of the city, as described above. When it finally entered the old harbour it is recorded as being 600 yards broad and 40 feet deep.

We drove up through Nicolosi to the snow line. The vegetation corresponds roughly to the three geological belts referred to above. The lowest and most cultivated has already been noticed; the second, known as the *regione boscosa*, supports pines, birches, small oaks and chestnuts grown for food. Before the great eruptions of the seventeenth century dense forests extended on the north side from the summit down to the Alcantara valley. The splendid fauna of these woods are now represented only by a few surviving boars, wolves and porcupines. A feature of the middle region is the height (up to 4,000 ft.) at which vines are found. One sees them planted in what looks like fresh black ash. The road cuts through the arms of lava flows at intervals, and on the black sections the dates are inscribed in large letters. The stone is then used for embanking and retaining. As the snow recedes upwards in the spring uncovering the *regione deserta* the violent contrast between the black area and the white is most impressive (Fig. 2). Where the snow remains longest there vegetation creeps higher. The upper region does not bear Alpine flora, but bears a

few sub-Alpine bushes and plants—juniper, barberry, red soapwort. From the snow line one looked downwards to the various subsidiary cones: they present a variety of interesting slopes from which coil away the long black banks of lava (Fig. 3). Then, looking upwards again, there was the white silent peak passive as winter itself. Above our heads for a moment I caught sight of two ravens circling high in air—two ravens mating on Etna.

On reaching the snow line the road quickly became impassable. Our driver turned us out into the snow and with his accustomed energy began pushing and edging and backing until he had turned the car in a slippery narrow defile. We then retraced our road to Nicolosi and, turning left, descended to the coast road and soon reached Taormina. There we said adieu to travelling companions and shook hands with our miraculous driver. Our tour was at an end. May St. Christopher continue to guard him and the travellers committed to his care.

At Taormina the wealthy of all nations walked to and fro on the incredible terraces and chattered in different tongues, laughing and embracing. But always someone would point southwards and others would look and exclaim, although the sight had been seen a hundred times before. We moved like courtiers in the presence. Etna occupied us as she veiled and unveiled herself, or disengaged her crown of vapour from the sea clouds, or held her snow cape more closely under the brilliant sun.

R.I.B.A. CODE OF PROFESSIONAL PRACTICE

GEOFFREY C. WILSON [F.]

Hon. Secretary, R.I.B.A. Practice Standing Committee

The amendments to the Code of Professional Practice recently made by the Council (on the recommendation of the Practice Standing Committee) make timely some reference to this Code of the Royal Institute of British Architects.

That the practice of Architecture throughout the British Empire is guided by the Royal Institute of British Architects is perhaps well known even to the most unreflecting architect and member of the public. That the Royal Institute exists as something more than a mere safeguard for the professional interests of its members is perhaps not so well appreciated by either the architect himself or the layman.

There are still many people who class the architect as an artist only, forgetting that he is also a man of science and of business, concerned with facts and figures.

It may, therefore, be of some value to remember that he is a professional man, and as with lawyers and doctors, his client's interests are his.

Building is a complex process, and a finished work is the achievement not of the architect alone, but of many persons. The best results, therefore, can only be obtained by a proper understanding and mutual confidence between the client, his architect, and the contractor.

Some architects and many clients do not perhaps realise that the architect has quasi-judicial functions under the contracts which he administers and that he must therefore interpret the conditions of such contracts with entire fairness as between the employer and the contractor. In all cases of dispute between the parties concerned the architect must act in an impartial manner and must therefore not only have the complete trust of his client but also that of the contractor and sub-contractors as well, if success is to be achieved in any building enterprise.

THE BASIS OF A CODE OF CONDUCT

The Royal Institute, to which the majority of qualified architects of the Empire belong, has a very high regard for professional conduct, and in the interests of the public is as strict in this respect as are such bodies as the Law Society and the General Medical Council. A member of the Royal Institute is governed by its bye-laws and by successive Charters granted since the year 1837. Its Practice Standing Committee is respon-

sible for recommending to the Council the principles of professional conduct which members of the Royal Institute of British Architects must adhere to, failing which the Council, after investigation by its Professional Conduct Committee, may judge a member guilty of unprofessional conduct and either reprimand, suspend, or expel him.

There is a well-known saying that "gentlemen will not, and others must not," which perhaps applies to any code of professional practice. It has often been said that while such a code is quite unnecessary in the case of nearly all members, it is impossible to draw up any written standard of conduct which can be made sufficiently watertight to apply to the people for whom it is most required. The logicity of this is as clearly agreed to by architects as by other professions, and the clauses in the R.I.B.A. Code only indicate in a very general way the standard of conduct to be adhered to and cannot specifically legislate for cases where a member might deliberately set out to infringe, certainly the spirit, if not the letter, of the Code. The existence of such a minimum standard is, however, a safeguard to the public as well as being of merely professional interest, and it is open to the Council under the bye-laws to deal with a case of alleged unprofessional conduct not specifically covered by the Code.

THE ARCHITECT AS A TRUSTEE

An architect, as we have already seen, is artist, scientist and business man, but from the point of view of the Code of Professional Practice, he is first and last a trustee for the proper expenditure of the building owner's money, though never actually handling it, and it is of primary importance that he should be able to give impartial and completely disinterested advice to his client. When, therefore, payments become due to the contractor under the terms of the contract, the architect issues his certificates stating the amount due and to be paid direct by his client to the contractor. He must be remunerated solely by his professional fees and is rightly debarred from any other source of remuneration in connection with the works and duties entrusted to him. This may seem so obvious that any comment is superfluous, but cases have arisen where an architect has accepted work involving the giving and receiving of discounts or commissions from contractors or tradesmen. That some blame attaches in this respect

to his client as well as to himself is obvious from the hypothetical case of Mr. X., who being the type of man who wishes to get something for nothing, decides to drive a hard bargain with an architect, hoping that he will not uphold the R.I.B.A. Scale of Professional Charges, but forgetting that such an architect may be equally disloyal to the Code. The architect finally agrees with his client to accept a ridiculously low fee, with the mental reservation that he will "pick up on the swings" of discount, gifts and commissions "what he has lost on the roundabouts" of fair and proper dealing. That there can be no possible excuse for such conduct is agreed, but Mr. X. cannot be held blameless or be given any sympathy if he is unable to appreciate that the maintenance of a strict professional code is as much in his interest as that of the architect.

It will, however, be noticed that architects are sometimes employed by commercial firms, which may at first sight appear an illogicality. There is, however, no objection to this, always provided that the architect so employed is remunerated solely by means of a salary, and that such remuneration must not in any way depend on commissions based on the profits of the firm who employ him. The R.I.B.A. notes this growing custom of the employment of architects in this capacity and is glad to see that commercial firms appreciate the necessity for employing the properly trained and qualified man in their own interests and those of the public, especially under the conditions which have often prevailed when many young qualified men have found it difficult, if not impossible, to obtain regular employment in any other way.

COMMERCIAL INTERESTS

This brings us to the case of the architect who may own or have a commercial interest in a material, device, or invention used in building. In the past the Royal Institute have felt that while it might be left to each individual's interpretation of the spirit of the Code, a ruling being necessary, the letter of the law has allowed him the benefit of the doubt, provided he first informed his client and obtained his sanction before specifying the use of anything in which he was financially interested in the works under his direction. This matter has, however, been reconsidered, and the Code amended accordingly. An architect is not now allowed to have any interest at all in a company or business trading in materials used in, or whose activities are otherwise connected with, the building industry or engaged in the financing or erection of buildings. He may, however, be a director of a building society, or engage, if he so desires, in commercial activities which have no connection with the trades or business mentioned above.

ADVERTISING

An architect, like any other properly qualified practitioner, may not advertise nor offer his services by means of circulars, nor may he make paid announce-

ments in the press. It is perhaps strange, therefore, that many people who would not be deceived by a circular from a "bucket-shop," preferring to invest even a small sum through a member of the Stock Exchange, have on occasion been inveigled into buying an expensive house through the specious advertisement of a speculator posing as an architect.

Illustrations and descriptions of buildings are matters of public interest and of necessity appear from time to time in both the professional and lay press under the name of the responsible architect; none of which is contrary to professional ethics, provided monetary consideration is not given for such insertions and there is no attempt to distribute the publication to potential clients.

An architect is also at liberty to sign his buildings in precisely the same way as a painter signs his picture, and it is a matter of some regret that this practice is not more common in the interests of architecture and the public. To prevent the abuse of this procedure, the Code, however, provides for those who "must not," that it is to be done in an unostentatious manner, and for those who cannot interpret the spirit and have to be bound by the letter of the law, the signature must not exceed 2" in height.

COMPETITION BETWEEN MEMBERS OF THE PROFESSION

That an architect must not attempt to supplant another architect nor must he enter into competition by means of reduced fees or by any other inducement, is a clause in the Code which the Royal Institute guard very jealously. This does not mean to impose any restraint on the liberty of the individual to make a change in his professional adviser, but is done to protect members from unscrupulous persons, both lay and professional, and an architect on being approached to proceed with professional work upon which another architect was previously employed shall notify the fact to such architect. Before revision, this clause in the Code placed upon Architect No. 2 (in addition to notifying Architect No. 1) the impossible task of enquiring and ensuring the fact that the first architect's engagement had been properly terminated. In the amended Code, the interests of both architects are safeguarded; No. 1 receives notification and can then take what action he considers necessary, but he is prevented from taking up an attitude which can best be described as that of "a dog in the manger."

In many large and important undertakings, and in most cases where the expenditure of public funds is involved, it has been the custom to invite architects to submit designs in competition. An architect is, however, not allowed to take part in a competition which the Council of the R.I.B.A. have not sanctioned as being in accordance with the conditions and regulations laid down for such purposes. The interests of the public are safeguarded under the Code by the prohibition of an

architect engaged as an assessor acting in any other capacity whatsoever in connection with a competition or the work which may arise out of it.

That auctioneering and estate agency are inconsistent with and must not form part of the practice of an architect does not, needless to say, cast any aspersion on these honourable callings, which embrace and require men of the highest ability and professional integrity, but rather that if combined with that of architecture they would render the complete disinterestedness of the architect questionable in the practice of his own calling.

On consideration, therefore, it will be clear that architect and client have a very real interest in the existence of a code of professional practice and can both do much in helping to uphold it.

This is neither the time nor the place to deal with the many phases of an architect's work, but apart from

technical and other qualifications which are ensured by the insistence of the R.I.B.A. on adequate training, it is perhaps as important to know that there exist some 18,000 persons directly or indirectly associated with the Royal Institute who are bound by a high sense of honour, fidelity and corporate responsibility expressed in a code adopted and enforceable by the Council. Some of the clauses in this code have been briefly referred to in this article, which is not, however, long or technical enough to deal with the detailed relations of an architect in everything appertaining to his own calling and its relation with the public and other professions, his individual responsibility, the conduct of his business, and many other relevant matters. Enough has been said, however, to show that the existence of a strict Code of Practice enhances the strength and dignity of the profession which observes it, and at the same time safeguards the interests of the public whose business it is that of the architect to serve.

THE AMULREE COMMITTEE

THE FOLLOWING IS AN ADDENDUM TO THE INTERIM REPORT OF THE AMULREE COMMITTEE ON HOUSING AND PLANNING POLICY PUBLISHED IN FEBRUARY 1936*

We understand that the original Report with this Addendum has been referred by the Minister of Health to his Housing Advisory Committee for report

1. Further consideration of the matters dealt with in our Interim Report on Housing and Planning Policy has shown that it is desirable that our proposals should be amplified in certain respects. Our principal recommendation, as outlined in paragraphs 7 and 8 of the Report, is that new machinery should be established, under the aegis of the Minister of Health, which would be responsible for the formulation of a policy and broad plan for the physical pattern of national development. Suggestions and queries which have been put to us since the publication of the Report indicate that there is general agreement as to the need for such machinery, but that there is some uncertainty as to the precise functions which it should perform and as to the constitutional position which it should occupy. In particular we have been asked whether it would be advisory or executive in character, and whether new powers of compulsion would be required to implement its proposals. In this Memorandum, which should be read as an Addendum to the Report, we attempt to answer these questions.

2. As we see it, the essential and immediate need is that some body should be set up to perform a function which is not at present being performed at all—that, briefly, of central plan-making. This function is quite distinct from the function, already satisfactorily performed by the staff of the Ministry of Health, of central administration of local planning schemes. It is equally distinct

from the function of preparing local planning schemes, which is at present and, subject to adequate central direction, should remain a responsibility of the local authorities for each region and district.

3. Whatever precise form is chosen for its machinery, this new function of central plan-making is essentially a task for a whole-time staff of technically skilled officers. The work of these officers, and of any committee or board which may be set up for its general direction, should be of wide scope and should have freedom to develop as circumstances and its own results may suggest. At the outset—indeed most probably for at least the first year of its existence—the work would be concentrated on making essential surveys and investigations and on establishing the necessary contacts with the Government departments, local authorities and other bodies which initiate or control development. Thereafter, as the facts and needs became clear, the work would be centred in the formulation and elaboration of general plans, but would embrace many other related activities in surveys, investigations, co-ordination and policy making.

4. We have no hesitation in describing such work as essentially *advisory*. It is clearly not in the ordinary sense executive or administrative. At the same time it is not limited to the narrow sense of the description “advisory” as frequently applied to bodies which are set up to be consulted only at the discretion of a Minister, and on such particular matters as may be referred to them. The machinery must operate continuously

* Published in JOURNAL, 21 March 1936 (Vol. xliii, No. 10).

and on the widest possible terms of reference ; it must have full power to obtain all the information it requires and to consult directly with the local authorities concerned ; and it must have full freedom in the preparation of plans and proposals for the Minister's and the Government's consideration. It should have direct access to the Minister, and should present full annual and other reports of its activities to Parliament.

5. While, however, the machinery itself should be set up and, in all probability, should remain on an advisory basis, its work would be of little assured value unless its plans and proposals, when approved by the Minister, could be put into effective execution. The more limited proposals, affecting particular localities only, would normally be incorporated in local planning schemes and be carried out by local planning authorities. But the proposals would often cover large regions or the whole country. In all such cases, the executive responsibility should, in our view, rest with the Minister of Health. Without the knowledge and plans which an adequate central survey and plan-making machinery can alone provide, it is impossible to forecast with any confidence what new action, compulsory or otherwise, by the Minister and the Government may be required. Therefore we do not at present propose any new powers of compulsion. We believe that the work of the new machinery which we would propose would, within a reasonably short time, make clear what new powers were needed and, more generally, what changes were needed in the planning system as a whole.

6. We are convinced that many local planning authorities are anxious to receive and to follow the guidance of central plans, without which they are at present so largely working in unavoidable uncertainty. The full force of ministerial leadership—by explanation, persuasion and administrative pressure—would, if based on comprehensive and intelligible central plans, overcome all but a small fraction of the possible opposition. Where persuasion failed, compulsion would be necessary if the matter in question were of sufficient importance. Usually one of the many "default" or other compulsory powers which the Minister already possesses, under the Town and Country Planning, Housing, Public Health and other Acts, would be sufficient for the purpose. It would only be in the last resort and in rare instances that new and more rapid powers might prove to be necessary.

AMULREE,
BALFOUR OF BURLEIGH,
E. BEDDINGTON BEHRENS,
A. C. BOSSOM,
EDGAR BONHAM CARTER,
THEODORE G. CHAMBERS,
B. SEEBOHM ROWNTREE,
ARTHUR SALTER,
RAYMOND UNWIN.

5 Duke Street,
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May 1936.





Part of the paintings by Sir James Thornhill in the dome

CLEANING ST. PAUL'S

The scheme for the general cleaning of St. Paul's Cathedral, which was inaugurated shortly after the end of the structural preservation work, is now nearing completion. At present work is being done on the painted portion of the cone where it is visible through the eye of the lower dome; otherwise the work is complete. The following description has been written from notes supplied by Mr. Godfrey Allen [F.], Surveyor to the fabric of St. Paul's Cathedral; the photographs have also been lent by Mr. Godfrey Allen.

The scheme of cleaning included the nave, transepts, west aisles, morning chapels and dome, together with the tambour from the level of the Whispering Gallery to the top of the entablature.

It is generally known that the internal masonry of the Cathedral was originally painted three coats in oil. The accounts show that this work was undertaken by William Thompson between 1709 and 1710, and that the price paid was 12d. per yard. This paint was removed during the latter half of the last century and from that period until 1931, when the present scheme was commenced, nothing in the way of any general cleaning appears to have been undertaken. Considerable quantities of sooty dust and dirt, caused partly by the old systems of heating and lighting, had collected, and to this had been added the dust created by the preservation works.

The interior stonework of the Cathedral is stained irregularly over large areas (see Fig. 2). In some places the stains are dark brown in colour and in others there are signs of a white efflorescence. The latter appear as a whitish bloom or as a hard white skin, the surface of which sometimes disintegrated and showed small lumps or craters (see Fig. 1).

The dark stains are believed to have been due to deposits of dirt and soot which had settled preferentially on places where the oil from the paint had penetrated the stone, and the white efflorescence to the pickle, which was employed in removing this paint. Experiments were made in one or two places to remove the stains with solvents so as to eliminate the patchy appearance of the stonework, but these experiments were not successful. A very marked improvement, however, in the general appearance of the stone was found to result by carefully removing the surface dust and subsequently scrubbing with plain water. This process got rid of some of the dirt from the dark patches and to some extent the efflorescence, and left the surfaces more uniform in appearance. In places where efflorescence had occurred the hard deposits of soluble salts were scraped off or wire brushed, and later thoroughly scrubbed with water and stiff brushes.

The general cleaning of the masonry was completed in 1934 and was followed by the cleaning of the tambour

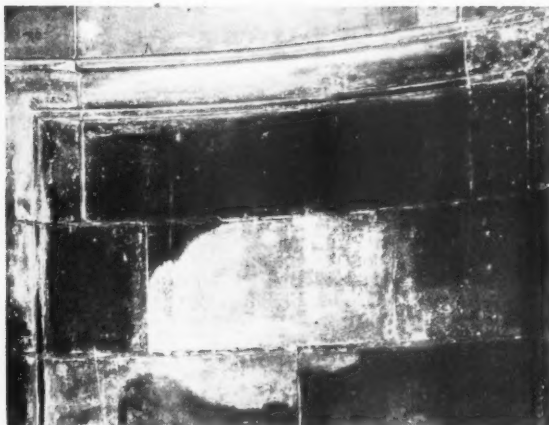


Fig. 1. Typical irregular staining of the masonry

of the dome and by the cleaning and restoration of Sir James Thornhill's paintings on the dome and cone, the latter work being undertaken by Professor E. W. Tristram (see Figs. 3, 4 and 5).

Thornhill's work at St. Paul's also included the decoration of the tambour, but the decorations here were painted out at a later date, possibly between 1853 and 1856, when the dome paintings were restored by Parris. Traces of the original decorations can still be seen beneath the later coats of paint, and the design appears to be similar to that shown on Gwyn's section, which "purports to be decorated agreeably to the intention of Sir Christopher Wren."

Sir James Thornhill was engaged upon his work at St. Paul's between 1715-1721, and the accounts record payments made to him as follows:—

24 June 1721 to 31 December 1721:—

For painting the Cupola with the History of St. Paul and other decorations, the gilding done with double gold, as per Agreement	£4,000	0	0
For painting and gilding the Lanthorn above the Cupola, as per Agreement . .	450	0	0
For painting and gilding the tambour of the Cupola from the Cupola to the iron balcony, as per Agreement	2,125	0	0

£6,575 0 0

References to scaffolding also appear in the accounts.

From 31 December 1717 to 24 June 1718:—

Carpenters further employed in taking down the upper range of scaffolding in the Dome, and in taking down the next range of scaffolding there. In building a scaffold in the Cone over the Cupola for Mr. Thornhill to paint the said Cone. . . .

From 24 June 1718 to 31 December 1718:—

Carpenters employed . . . in making a scaffold for Mr. Thornhill in the cone of the Dome.

From 17 June 1719 to 31 December 1719:—

Carpenters employed . . . building a new scaffold in the Whispering Gallery.

From 31 December 1719 to 24 June 1720:—

Carpenters employed in making the scaffolding from the Whispering Gallery up to the Intabature.

Masons employed in repairing the upper part of the dome with new stone for the better receiving the Painter's work.

Labourers further employed in hoisting up timber for the scaffold newly erected for Sir James Thornhill and lowering down the Great Scaffold in the Dome.

The paintings represent eight scenes from the life of St. Paul, namely: The Conversion; The Preaching before Sergius Paulus and the Punishment of Elymas the Sorcerer; The Sacrifice at Lystra; The Conversion of the Gaoler at Philippi; The Preaching at Athens; The Burning of the Books at Ephesus; The Defence before Agrippa; and The Shipwreck at Melita.

On the open book in the panel depicting the Burning of the Books at Ephesus the following inscription was found during the recent restoration: *The paintings in the Dome were originally designed and executed by Sir James Thornhill, 1720. The lower part destroyed by damp 25 ft. all round. Entirely repainted by E. T. Parris without any assistance 1853-1856.*



Fig. 2. A typical area of wall before cleaning



Fig. 3. A detail view of part of Thornhill's paintings in the dome, partially cleaned. The lower portions were found to have suffered from penetration of damp. They have been cleaned and restored by Professor E. W. Tristram

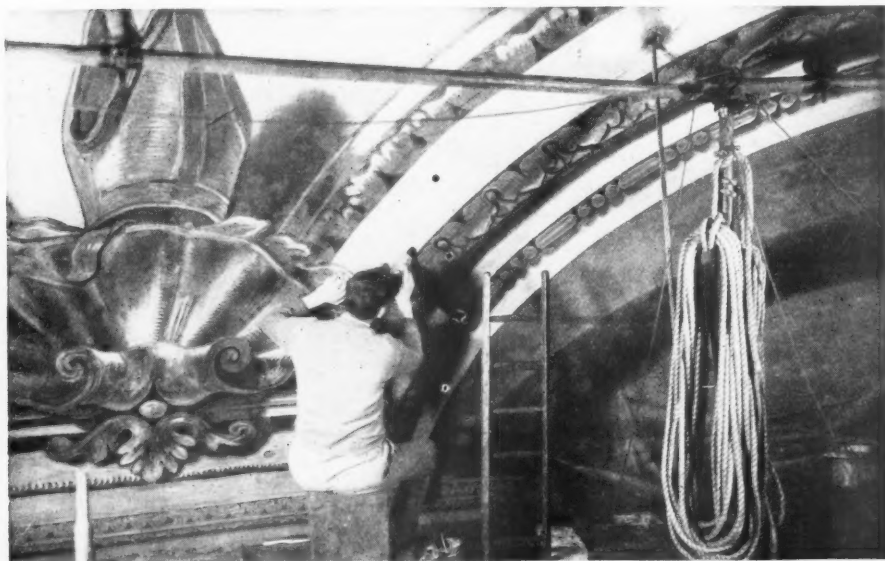


Fig. 4. Cleaning work in progress on the dome paintings. One of the holes through which the scaffold was suspended can be seen on the right.

The damp which destroyed the lower portions of the paintings and caused blistering of the plaster ground, both before and after the restoration of 1856, is attributed to moisture finding its way through the paving of the stone gallery, which, prior to the reconstruction of this part by Mr. Somers Clarke, was in a very defective condition. The paintings on the cone, which are now in process of restoration, have also suffered from the effects of damp, though to a less extent than the lower parts of the dome paintings.

According to the *Parentalia*, the scaffolding used for the execution of the dome paintings was, in fact, the centering upon which the dome was turned. The problem of providing a scaffolding for the present work was satisfactorily solved by Mr. E. J. Bolwell, the Cathedral clerk of works. Two schemes were considered and a scale model of each was made. One scheme was of a movable arched section running on two rails, one to be fixed above the eye of the dome and the other above the cornice at the springing, the extrados of the arch to be concentric with the curve of the dome and to support stagings at regular intervals from which the work could be executed. The scheme actually adopted was of stagings built up from a base projecting from the springing and suspended from the timber trusses of the dome through holes in the brickwork (see Fig. 6). Sufficient scaffolding was erected to cover about one-eighth of the painted area and this was moved round in sections as the work progressed.

The cleaning and restoration of the dome paintings has taken about 15 months to complete, and Professor Tristram estimates that the work on the cone will be finished by the autumn.



Fig. 5. A detail view illustrating both Thornhill's bold and vigorous painting and the effectiveness of Professor E. W. Tristram's restoration.



Fig. 6. A general view of the scaffolding in the dome with cleaning work in progress. The scaffolding, designed by Mr. E. W. Bolwell, the Cathedral Clerk of Works, was suspended and moved round by stages as the work progressed



The memorial pavilion seen from the far end of the paddling pool, near the main entrance

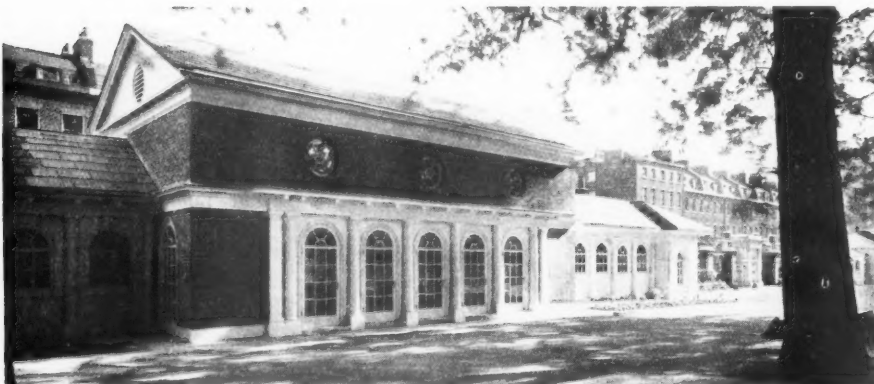
The efforts made during the past few years to preserve the site of the Foundling Hospital as an open space were brought to fruition when recently the Duchess of York formally opened it as a children's park and play centre.

The buildings of the Foundling Hospital were erected in 1742, to the designs of an unknown architect. Captain Coram, after whom the site has now been named, was the creator of the hospital. When the site first came into the market the buildings were demolished with the exception of some of single storey, mainly open colonnades, which enclose the front part of the site. Even these were in part destroyed.

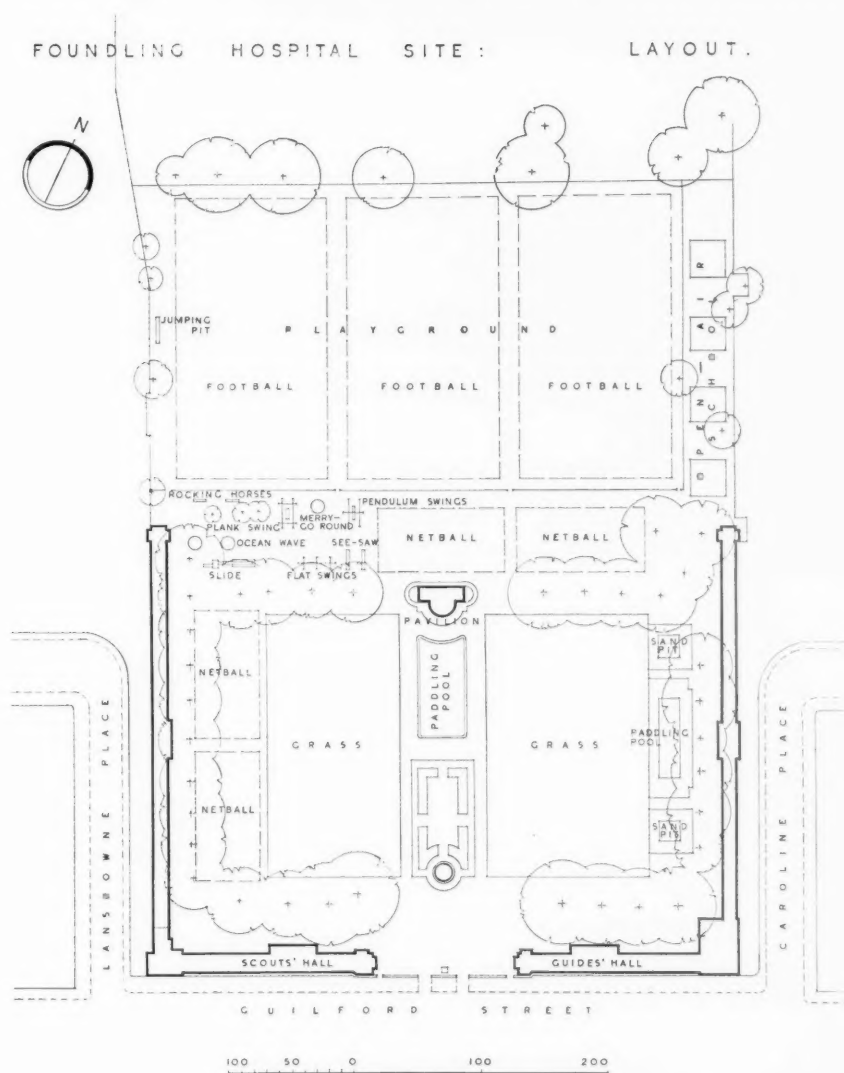
The site was purchased by public subscription after many difficulties and anxieties had been overcome, the principal contributors being Viscount Rothermere and Sir Henry Mallaby-Deeley. The London County Council also made a contribution and undertook to lay

CORAM'S FIELDS

GUILFORD STREET
LONDON, W.C.1



One of the two new halls for boy scouts and girl guides. These have been placed in gaps in the existing buildings and designed to harmonise with them

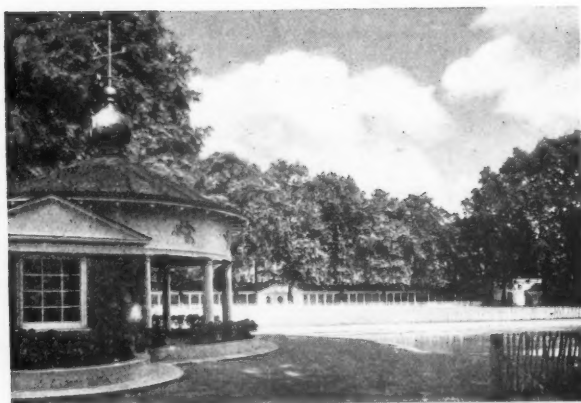
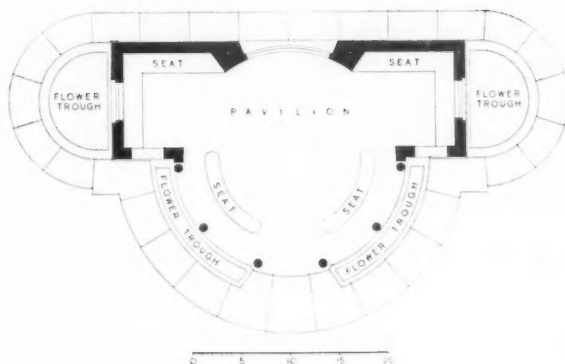


General plan of the site showing its layout as a play centre

out the site, to maintain it, and to organise its use by the schoolchildren of the neighbourhood.

The general layout plan is the work of the Parks Department of the London County Council. The architect responsible for the buildings is Mr. L. H. Bucknell [F.]. This work consisted of the provision of a new central pavilion, the erection of two halls where gaps had been made in the buildings that

remained, and general structural repairs and redecoration. The pavilion is a memorial to the two sons of Lord Rothermere, who fell in the war. It is built with brick walls, reinforced concrete columns and drum and timber roof framing. The roof surfacing, clock case and weather vane are of copper. The concrete is surfaced with stucco and inset in the frieze are panels of white terra-cotta depicting children playing. These



are the work of Miss Marjorie Meggitt, a Rome Scholar in Sculpture.

The two halls—for boy scouts and girl guides—are of simple design, and accord generally with the existing buildings. Other work consisted of the provision of kitchen and lavatory accommodation. The large "band room" in the corner is decorated with varnished railway posters.

The quantity surveyors were Messrs. Cameron & Stevens.

CONTRACTORS AND SUPPLIERS

GENERAL CONTRACTORS: G. E. Wallis & Sons.

STRUCTURAL: Facing bricks, G. Tucker & Son, Ltd. Stonework, Broadmead Products Co. Steelwork, Matthew T. Shaw & Co. Copperwork, Fredk. Braby & Co. Slating, Roberts, Adlard & Co. Plasterwork, Honeywill & Stein. Paint, Mander Bros. Lino, Cellulin Flooring Co. Composition flooring, Linolite Composition Flooring Co. Wood block floors, Hollis Bros.

EQUIPMENT: Sanitary fittings, William E. Farrer. Clocks, Gent & Co. Heating and hot water supply, Gas Light and Coke Co. Ironmongery, Nettlefold & Sons. Wrought ironwork, George Wright (London), Ltd. Kitchen fittings, Kandy, Ltd. Electrical work, T. Clarke & Co. Lettering, J. M. Mower & Son. Gilding, J. Wolff & Son.

Two views and the plan of the central pavilion. The walls are of two-inch bricks, the drum and columns are of reinforced concrete covered with stucco. The roof, clock case and vane are of copper. The panels in the frieze (of children playing) are the work of Miss Marjorie Meggitt

Book Reviews

SMALL HOUSES

HOUSES FOR MODERATE MEANS, by Randall Phillips. 4to. 112 pp. London: Country Life. 1936. 6s.

This book conforms to a popular type for which there is continual demand from laymen and architects. It consists of a series of straightforward pictures of houses, always one of the outside and sometimes more, some interior views, and clear plans. This is accompanied by a short array of information, the architect's name, the date of the house, the materials and construction used, general planning information, and the cost as near as may be.

Mr. Phillips's introduction is short and sensible, and clearly written for laymen. It includes notes on style, materials, equipment, costs, and as good a statement of the pros and cons of the flat-roof question in ten or twelve lines as we have seen, put in such a way that the prospective house-builder who comes to the book for a cut-and-dry answer will find after all that he must choose for himself what he wants. The introduction and the book as a whole make no pretence to represent a point of view. Houses of all types of styles and all costs between £1,750 and £400 are included, and the range can be said to represent every contemporary phase of English architecture worth a moment's attention.

The plans are almost without exception well drawn and clearly lettered. The photographs are mostly quite up to Country Life standard, though there are some bad misfits and more pictures of some houses than their quality would seem to warrant. It is unfortunate that the houses are not arranged in any definite order, either by size, style or price. If this had been done the book would undoubtedly have gained in value; the list classified according to accommodation at the beginning is useful, but not as useful as it would have been if the arrangement given there had been applied to the examples themselves.

The book meets a demand and is very modestly priced.

INDUSTRIAL SYMBOLS

SYMBOLS, by Kenneth Brady, with a note by Donald Boyd. Ob. 4to. Manchester: Harlequin Press. 1936. Limited edition.

Mr. Brady is a member of the Institute who has specialised in the design of industrial "symbols" or trade marks, as they can be less pompously called. The book has twenty examples of his work, all are good, some superlatively so. They have the proper epigrammatic quality that "gets home" without a line wasted or an atom of pains spent on unnecessary effects. The best are those formed of initial letters; the less successful are those verging on the pictorial. Mr. Brady has a rare facility in weaving his letters simply into dramatic patterns. In the past the artist who composed monograms generally elaborated the letters into a maze of whirligig forms until with so much "drapery" flying around anything could be done to link otherwise unrelated forms; Mr. Brady, on the other hand, eliminates everything but the barest essentials of a sans-serif letter and then combines them in a pattern in which the letters still "read" and which is satisfying and memorable. The ones that seemed best to us were those for the Manchester Chamber of Commerce, the Manchester Development Committee, and the Cloister Press. But it is not easy to particularise; every one illustrated would honour the patron firm or adorn the article on which it is placed.

THE COST OF INTENSIVE DEVELOPMENT

THE HOUSING PROBLEM: How planned distribution may prevent overcrowding, by Sir Raymond Unwin. Reprint from Jnl. Royal Sanitary Inst. Vol. LVI, No. 10. 1936.

In this paper Sir Raymond makes an exact analysis of the relation between dwelling houses and open spaces in modern housing. The argument is directed to show that by proper planning low density housing is cheaper, more amenable and just as possible as intensive high density housing.

Half a million dwellings at 12 to the acre would only increase the radius of London by 0.09 mile. Two-storey dwellings at 12 to the acre would bring with them 355 sq. yds. of open land per family, of which 54 would be roads and 301 yards, gardens or playgrounds. Half a million dwellings at 40 to the acre would increase the radius of London by 0.30 mile, but would give only 98.5 yds. open space per family, even if the dwellings were in four-storey flats. As the density per acre increases so the open space decreases. "If (such) development takes place without making more adequate provision, then, either the provision must be made elsewhere, at a cost to the public . . . or the occupants must go short of part of the life which would otherwise be available to them."

Sir Raymond puts the case against piecemeal and unco-ordinated intensive development cogently, approaching the subject from a new angle. The conclusion of the argument is that the people who advocate high intensity development on isolated sites where there is no building at present, or low intensity building, are either neglecting the need to provide open recreation space at the generally accepted minimum of 7 acres per thousand people, or are facing themselves with the necessity of providing recreation space far from the dwellings, where it is less useful and more expensive for the people to use. He shows that the cost of intensive development is inevitably more expensive and almost inevitably introduces more problems than it solves.

STEEL BRIDGES

SMALL SPAN BRIDGES. Paper presented at the Fourth International Congress for Steel Development, Brussels, 1935. 4to. 74 pp. British Steelwork Association. 1936.

This is a well-illustrated booklet dealing in considerable detail with the form and construction of a large number of steel bridges, mostly on the Continent. The illustrations are excellently reproduced and well chosen. The papers are mostly by engineers, but do not all deal solely with engineering technicalities.

DIRECTORY OF CONTRACTORS AND PUBLIC WORKS ANNUAL, 1936. London: Wightman. 17s. 6d.

This directory contains lists of all types of contractors, and is valuable as a guide to architects wanting information about specialists in particular types of work. Lists of the staffs and other relevant information about Government departments is given, and the names of Town Clerks, Borough and City and County Surveyors and Engineers, and a list of architects, which seems to consist almost entirely of members of the R.I.B.A. The directory is a valuable addition to any architect's shelves.

MODERN ALPHABETS

LETTERING: A HANDBOOK OF MODERN ALPHABETS, by Percy J. Smith. Sm. 4to. xii + 100 pp. + 4 plates. London: Black. 1936. 10s. 6d.

In recent years it has become the habit in architectural schools and in some of the more "up-to-date" offices for drawings to be lettered with crudely designed stencils. The habit originated on the Continent, and has little more validity than that derived from the fact of its foreign origin. Stencil lettering, which some architects think is more in tune with modern mechanistic practice, is seldom more economical in time or more pleasing in appearance and not necessarily more modern in appearance than drawn letters. It is probable that only those heavy handed draughtsmen who can only write freehand painfully and slowly find that the method really saves much time, and for a facile draughtsman it probably saves none.

The result of the use of stencils is that, whereas formerly all architects gained some knowledge of good lettering from their constant practice on their own drawings, to-day they not only do not know how to letter, but have cultivated a quite unreasonable prejudice against lettering as an art. It is in fact considered "arty." The moment, however, that an architect starts practice he is up against it. There can be few jobs which do not involve some lettering: shops on their facias, offices on their doors and notice boards, houses

on their front doors and gates, and so on. If proper understanding of architectural lettering is to remain part of our tradition in this country, architects will have to learn from books what formerly they learnt naturally on their own drawing boards. They will perhaps more and more have to put their faith in experts who like all craftsmen and designers are likely to turn out better work for those who understand than for those who don't.

Mr. Percy J. Smith is one of the experts whose work is well known in England now. Among his clients have been the L.C.C., the B.B.C., the Underground Railways and the R.I.B.A. (He designed and wrote the names of Past-Presidents and Royal Gold Medallists in the Institute Hall.) Because he brings a wide experience with him, what he has to say is of interest and the book, if certain unfortunate examples can be forgotten (pp. 38-46, pp. 58, 59, pp. 61 and 67), will be of value to students who are studying the art of lettering scholastically or with a view to the practice of the craft.

The book consists of about thirteen introductory pages of simple and conservative advice, followed by many pages of examples of sign-writers' letters, poster lettering, penmanship, applied and architectural lettering and various initials and decorative uses of letters. At the end are illustrations of a number of printers' display types which may properly be included in a book on lettering without begging the question where lettering ends and typography begins. Among these are several excellent foreign faces and the new *Times* face.

Review of Periodicals

Attempt is made in this review to refer to the more important articles in all the journals received by the Library. None of the journals mentioned are in the Loan Library, but the Librarian will be pleased to give information about prices and where each journal can be obtained. Members can have photostat copies of particular articles made at their own cost on application to the Librarian.

SCHOOLS AND UNIVERSITIES

BUILDER. Vol. CLI. No. 4878. 1936. 31 July.
Whittingehame College, Preston Park, Brighton, by A. V. Pilichowski; also Licensed Victuallers' new school, Slough, by J. R. Leathart [A.], in association with W. F. Granger [F.].

BAUMEISTER (MUNICH). Vol. XXXIV. 1936. August. P. 275.
New "Volksschule," Berghall, Finland, by Gunnar Taucher; 5 upper floors.

ARCHITECT AND BUILDING NEWS. Vol. CXLVII. No. 3531. 1936. 21 August.
The Jules Ferry School, Maisons-Alfort, Paris, by A. Dubreuil and R. Hummel; good planning.

BATIR (BRUSSELS). 1936. August.
Some new schools in Belgium.

MUSEUMS AND EXHIBITIONS

CASA BELLA (MILAN). Vol. IX. 1936. June-July. P. 6.
New "Palace of Arts" pavilion for the Milan triennale exhibition, by G. Pagano.

BEAUX ARTS (PARIS). 1936. 31 July.
New museum, Nancy, by Jacques and Michel André. Photos and description; no plan.

ARCHITECTURE U.S.S.R. 1936. July. P. 12.
U.S.S.R. pavilion for Paris 1937 Exhibition.

ARCHITECTURAL REVIEW. Vol. LXXX. 1936. August.
Exhibition stand at Royal Agricultural Show, Bristol, for furniture manufacturer, by Marcel Breuer and F. R. S. Yorke [A.].

MON. F. BAUKUNST U. STADTEBAU (BERLIN). 1936. August. P. 287.
Exhibition stand for city of Stuttgart by G. Graubner.

WERK (ZURICH). Vol. XXIII. 1936. August.
Exhibitions: Milan triennale and printing trades exhibition Basel, 1936.

CASA BELLA (MILAN). 1936. 14 August.
Some Italian exhibition buildings.

GOVERNMENT BUILDINGS

BUILDER. Vol. CLI. No. 4881. 1936. 21 August.
ARCHITECT AND BUILDING NEWS. Vol. CXLVII. 1936. 14 August. P. 185.
Southern Rhodesia Parliament Buildings Competition schemes reviewed.

SPORTS BUILDINGS

REVISTA DE ARQUITECTURA (BUENOS AIRES). 1936. June. P. 274.
Bathing pool and beach, "Punta Lara," for the "Jockey Club de la Provincia," by L. M. P. Estrada; a large, interesting scheme.

CONCRETE. Vol. XXXI. 1936. August. P. 435.

Bathing pool at Portobello by E. E. Barnard, M.Inst.C.E.

ARCHITETTURA (ROME). 1936. July. P. 332.

Casa Balilla, Forlì, by Cesare Valle, includes a small cinema, gymnasium and swimming bath; useful reference.

CONSTRUCTION MODERNE (PARIS). Vol. LI. 1936. 9 August. Ankara, Turkey; sports arena with stadia, pavilions, etc.

BAUMEISTER (MUNICH). Vol. XXXIV. 1936. August. Festival and sports hall, Helsingfors, Finland, by Hytönen and Luukkonen.

BAUWELT (BERLIN). Vol. XXVII. 1936. 30 July. P. 3.

MON. F. BAUKUNST U. STADTEBAU. 1936. August. P. 269.

DESIGN & CONSTRUCTION. Vol. VI. No. 10. 1936. August.

BAUFORMEN (STUTTGART). Vol. XXXV. 1936. August. The Olympic Games buildings, Berlin, fully described and illustrated.

BUILDER. Vol. CLI. No. 4882. 1936. 28 August.

New baths, Norris Green and Dovecote estates, Liverpool, by Albert D. Jenkins, F.S.I.

COMMERCIAL

ARKITEKT. Nos. 5-6. 1936. 6 July.

Belediye Banhasi, Ankara. (Bank.)

ARCHITECT AND BUILDING NEWS. Vol. CXLVII. 1936. 7 August. P. 161.

Warehouse, Pentonville Road, King's Cross, for Lilley and Skinner, by Owen Williams.

ARCHITECTURAL RECORD. Vol. LXXX. No. 2. 1936. August.

Article on stores and other commercial buildings; many useful plans and photographs.

TER ES FORMA (BUDAPEST). Vol. IX. 1936. 8 August.

Article on the design of small shops with about 30 illustrations.

ARCHITECTS' JOURNAL. Vol. LXXXIV. No. 2171. 1936. 27 August.

Film studios at Shepperton by Connell, Ward & Lucas. An analysis of the principles governing the design, with some very useful illustrations.

MON. F. BAUKUNST U. STADTEBAU (BERLIN). 1936. August. "Ufa" cinema studios and offices, etc., Neubabelsberg (!) by Otto Kohtz.

TRANSPORT BUILDINGS

SOUTH AFRICAN ARCH. RECORD. Vol. XX. 1936. May. Large garages. Article by T. Schaerer [F.] and illustration of garage at Durban by W. B. Barboore.

BAUWELT (BERLIN). Vol. XXVII. 6 August. P. 769. Schemes for large garage, Wiesbaden.

INDUSTRIAL

ARCHITECTURE U.S.S.R. 1936. June. P. 2.

Competition designs for the Office of the Commissariat of Heavy Industry Workers, Moscow.

PITHEAD BATHS

ARCHITECTURAL REVIEW. Vol. LXXX. 1936. August. P. 72.

Pithead bath and canteen, Coventry Colliery, Kersley, War., by W. A. Woodland, of Miners' Welfare Committee Architects' Dept., under J. H. Forshaw [F.].

ARCHITECT AND BUILDING NEWS. Vol. CXLVII. 1936.

14 August. P. 195.

Bentnck Colliery, Notts. Pithead bath by A. J. Saise [A.], of Miners' Welfare Committee architects' dept.

HOSPITALS AND WELFARE BUILDINGS

BUILDER. Vol. CLI. 1936. 7 August. P. 252.

ARCHITECT AND BUILDING NEWS. Vol. CXLVII. 1936. 14 August. P. 189.

Surbiton Hospital, Surrey, by Wallace Marchmont [F.].

ARCHITETTURA ITALIANA. Vol. XIV. 1936. July.

Sun therapy colony, Turin, by Ferroglio, with Grassi and Passanti.

HOTELS AND RESTAURANTS

BUILDER. Vol. CLI. 1936. 7 August. P. 249.

"The Round House" public-house, Becontree, by D. W. Blomfield [F.].

ARCHITECTURAL REVIEW. Vol. LXXX. 1936. August. P. 74.

"Vega" Restaurant, Leicester Square, London, by Samuel and Harding [A.A.].

CHURCHES

ARCHITECTURAL REVIEW. Vol. LXXX. 1936. August. P. 61.

Hillsborough Church, Sheffield, by C. M. Hadfield and R. Cawkwell [F.A.].

ARCHITECT AND BUILDING NEWS. Vol. CXLVII. 1936. 7 August. P. 165.

Church halls, Kilpatrick, Scotland, by A. G. MacNaughton [L.], with stage and small hall for meetings. Also small dance hall at Plaistow, London, E., by G. Lacoste.

CONSTRUCTION MODERNE (PARIS). Vol. LI. 1936. 9 August. P. 894.

St. Antony of Padua Church, Paris, by L. Azéma.

BAUGILDE (BERLIN). No. 24. 1936. 18 August.

Die Neue Evangelische Kirche, Russhütte, by Regierungs Baumeister and D. Rudolf Krüger.

DOMESTIC

ARCHITECTS' JOURNAL. Vol. LXXXIV. 13 August. P. 210.

ARCHITECTS' JOURNAL. Vol. LXXXIV. No. 2170. 1936. 20 August.

ARCHITECTURAL REVIEW. Vol. LXXX. 1936. August. P. 55.

House, Frognaal Way, Hampstead, by E. Maxwell Fry [A.], the most important concrete dwelling house yet built in London.

ARCHITECTS' JOURNAL. Vol. LXXXIV. 1936. 6 August. P. 175.

ARCHITECT AND BUILDING NEWS. Vol. CXLVII. 1936. 7 August. P. 167.

Houses at Haywards Heath by Tecton. Also in A. & B. N., house at Stuttgart by H. P. Schmöhl.

THE ARCHITECTURAL FORUM. Vol. LXV. No. 2. 1936. August.

A review on Britain's building boom. Also a splendid analysis on the planning of domestic units.

BUILDER. Vol. CLI. 1936. 14 August. P. 292.

"The Sweep." Block of flats, Clapham Common, by J. J. de Segrais [A.]. Also The Grove, St. John's Wood, N.W. Flats by Richardson & Gill [FF.].

ARCHITECTS' JOURNAL. Vol. LXXXIV. 1936. 13 August. P. 205.

Brae Court, Kingston-on-Thames, flats by Armstrong and Bayne. 68 flats four and three rooms.

BAUWELT (BERLIN). Vol. XXVII. 6 August. P. 766. Housing plans of tenement dwellings of varying sizes.

BUILDER. Vol. CLI. No. 4882. 1936. 28 August. Competition for Working-class Flats, Birmingham, reviewed.

TOWN PLANNING

JNL. ROYAL SANITARY INST. Vol. LVII. 1936. August. 1935 Housing Act overcrowding survey. Papers by Sanitary Inspector, Nottingham, and M.O.H., Worcester.

TOWN AND COUNTRY PLANNING. Vol. IV. No. 16. 1936. September.

Planning and Replanning in the Pottery Districts.

CASA BELLA (MILAN). Vol. IX. 1936. June-July. P. 22. The architecture of an industrial city. Full article on Zlin (Bata shoes).

BRIDGES

ARCHITECTURAL REVIEW. Vol. LXXX. 1936. August. P. 63.

Early iron bridges of the British Isles. Illustrated article by C. B. Andrews.

ARCHITETTURA (ROME). 1936. July. P. 310.

Competition designs for bridge over the Tevere leading to the Mussolini Forum.

CONSTRUCTION

CIVIL ENGINEERING. Vol. XXXI. No. 362. 1936. August.

Notes on sheet steel and concrete piling; useful reference.

GENERAL AND HISTORICAL

ARCHITECTS' JOURNAL. Vol. LXXXIV. No. 2171. 1936. 27 August.

Review of the Proposed Amendments to L.C.C. By-laws.

BAUFORMEN (STUTTGART). Vol. XXXV. 1936. August. P. 425.

German Air Ministry at Berlin by Prof. E. Sagebiel.

MON. F. BAUKUNST U. STADTEBAU (BERLIN). 1936. August. Data sheet.

Equipment for gasproof shelters.

ARCHITECTURAL REVIEW. Vol. LXXX. 1936. August. P. 77.

Charles Mathews. Biographical article by Dudley Harbron [F.].

BAUWELT (BERLIN).

This important German weekly journal is now being received regularly.

Accessions to the Library

1935-1936—XI

Lists of all books, pamphlets, drawings and photographs presented to, or purchased by, the Library are published periodically. It is suggested that members who wish to be in close touch with the development of the Library should make a point of retaining these lists for reference.

Any notes which appear in the lists are published without prejudice to a further and more detailed criticism.

Books presented by publisher for Review marked

Books purchased marked

*Books of which one copy at least is in the Loan Library.

R.

P.

REFERENCE BOOKS

DICTIONARY OF NATIONAL BIOGRAPHY

The D— of N— B—. Founded in 1882 by George Smith. Reprint. (India paper edition.)

9 $\frac{1}{2}$ " Oxford and Lond.: U.P. 19—, From the earliest times to 1900. Sir Leslie Stephen and Sir Sidney Lee, eds.

xxi vols., & Suppt. (xxii). (1921-22.) Supplement. 1901-1911. Sir Sidney Lee, ed.

3 vols. in 1. 1912 (1927). 1912-1921. H. W. C. Davis and J. R. H. Weaver, eds. (With index covering 1901-1921.)

1927. Presented by Mr. Basil Ionides [L.].

SCOTTISH MUNICIPAL ANNUAL

—, 1936.

1936. R.

ARCHITECTURE

SALMON (WILLIAM)

Palladio Londinensis: or, The London art of building.

40. London 1734.

Presented by Mr. Sydney Tatchell [F.].

SOCIETIES (GENERAL)

SCHWEIZERISCHER INGENIEUR- UND ARCHITEKTEN-VEREIN

Offizielles mitglieder-verzeichnis . . . 1936.

[1936]. R.

ESSEX, CAMBRIDGE AND HERTFORDSHIRE SOCIETY OF ARCHITECTS

Year book, 1937.

[1936.] R.

ROYAL SOCIETY OF ULSTER ARCHITECTS

Year book, 1936-37.

[1936.] R.

PRESERVATION

SOCIETY FOR THE PROTECTION OF ANCIENT BUILDINGS

Annual report (59th) [on 1935-36], etc.

1936. 2s. 6d. R.

HISTORY

HITCHCOCK (HENRY RUSSELL), junr.

The Architecture of H. H. Richardson and his times.

10". xxiv+311 pp.+pls. New York: Museum of Modern Art. 1936. (\$6)

Presented by the author.

DRAWING

SMITH (PERCY J.)

*Lettering. A handbook of modern alphabets.

9 $\frac{1}{2}$ ". xii+100 pp.+pls. Lond.: A. & C. Black. 1936. 10s. 6d. Presented by the author and R.

MEDWORTH (FRANK)

*Perspective.

1936. 15s. R.

Copy for Loan Library.

PROFESSIONAL PRACTICE

R.I.B.A.

Professional conduct and practice. IX. (Apl.)

pam. 13". Lond. 1936.

FARNHAM, Hants, Urban District Council

Bye-laws . . . with respect to new streets & buildings, etc.

pam. 8 $\frac{1}{2}$ ". Farnham. 1934. Presented by the Council.

MINISTRY OF HEALTH

[Approval of plans.] Memorandum. Approval of plans. New streets and buildings. (C. 34.)

New issue. dupl. typescript. 13". Lond. 1936. R.

BUILDING TYPES
(RELIGIOUS)CEMENT AND CONCRETE ASSOCIATION
Concrete churches.

pam. 11". Lond. [195--.] R.

STOKE D'ABERNON, Surrey: CHURCH

Church of S. Mary, Stoke D'Abernon.

folding card 8½" n.p. [after 1907.]

HARRIS (EDWIN)

Cobham Church [Kent] and its brasses. (Eastgate series of historical guides, No. 2.)

2nd ed. pam. 7¼". Rochester: Mackays. 1929. 2d.

CROPPER (JAMES)

Parish church of Penshurst, etc.

leaflet 8¾". n.p. 1929.

WESTERHAM, Kent: CHURCH

Notes on the ancient parish church of Westerham.

leaflet 10". [Westerham. 19—.]

HORSHAM, Sussex: CHURCH

An Account of . . . the ancient parish church of S. Mary the Virgin, Horsham.

leaflet 5". [Horsham.] n.d.

R. (H. N.)

A Short account of the parish church of St. Faith, Havant.

pam. 7¾". Havant. 1932.

YAVERLAND, I. of W.: CHURCH

Historical notes on Yaverland Church, Isle of Wight.

leaflet 7". n.p. [19—.]

—All presented by Mr. K. A. Harman.

(EDUCATIONAL)

ARCHITECTS' JOURNAL

* [Special issue.] Schools. (28 May.)

12¼". Lond. 1936. P. for Loan (2).

EYMERS (J. G.)

Fundamental principles for the illumination of a picture gallery together with their application to . . . the Municipal Museum at The Hague.

10". xii+70 pp. The Hague: Nijhoff. 1936. (5s. 8d.) P.

MACDONALD (A. SNEAD)

*A Library of the future. (From Library Journal, 1 & 15 Dec.)

pam. 10¾". n.p. 1933.

Presented (2) by Mr. L. E. Helbig.

One copy (to Reference Library) with 14 photostat plates.

*Some engineering developments affecting large libraries.

leaflet 10". n.p. [19—.]

Presented (2) by Mr. L. E. Helbig.

COLUMBIA UNIVERSITY, New York

*South Hall [library building], C—U—, N—Y—.

1935.

Extra copy for Loan Library.

Presented by Mr. L. E. Helbig.

(DOMESTIC)

MINISTRY OF HEALTH

Housing. House production, slum clearance, etc. England and Wales. Position at 31 March 1936.

1936. 4d. R. (2).

UNITED STATES: CENTRAL HOUSING COMMITTEE

Activities and organisation of Federal agencies concerned with housing.

dupl. typescript. ob. 10¼" × 15¾". [Washington.] 1936.

Presented by the Committee at the request of the Director of Housing.

UNITED STATES: INFORMATION SERVICE

Services of the Federal Government to home owners and tenants.

pam. 9¼". Washington: Govt. Printing Office. 1935.

Presented by the Central Housing Committee at the request of the Director of Housing.

CLARKE (JOHN J.)

*The Law of housing and planning, etc.

3rd ed. of Outlines of the law of housing and planning.

8½". lv+408 pp. Lond.: Pitman. 1936. 15s. R. & P.

KNOOP (DOUGLAS) and JONES (G. P.)

The Bolsover Castle building account, 1613. (Preprint, Ars Quatuor Coronatorum, xlix, 1.)

10¾". 56 pp. Lond.: Quatuor Coronati Lodge. 1936. 2s. 6d.

Presented by the authors.

DUTTON (RALPH) and HOLDEN (ANGUS)

*English country houses open to the public.

2nd ed. 7". 245 pp. + (10) pls. Lond.: Geo. Allen &

Unwin. 1935. 5s. R.

First edition (1934) to Loan Library.

INTERIORS, DETAILS, FITTINGS

PATMORE (DEREK)

Modern furnishing and decoration.

2nd ed. 9¾". 40+(32) pp.+xlviii (xvi not backed) pls.

Lond.: The Studio. 1936. 10s. 6d. P.

STEVENSON (J. A. R.)

*The Din of a smithy. Passages selected . . . by A. F. Collins.

(The Craftsman series.)

7½". viii+112 pp.+4 pls. Camb.: U.P. 1936. 3s. 6d. R.

To Loan Library.

ALLIED ARTS AND ARCHÆOLOGY

PLIOAN (JOSEPH)

History of art. R. L. Roys, trans.

Vol. iii. 80. Barcelona: Salvat; Lond.: Batsford. 1927.

(10s.) P. to complete set.

SOCIETIES.

SOCIETY OF ANTIQUARIES OF SCOTLAND

Proceedings. 1934-35. Vol. lxix (6th series—vol. ix).

1935. R.

BUILDING SCIENCE

BUILDER'S PRACTICAL DIRECTOR

The Builder's practical director, etc.

40. Leipzig, Dresden, and Lond. [18—.]

—Supplementary series. (Half-title only.)

40. n.p. [c. 1856.]

NEW PRACTICAL BUILDER

The New practical builder, and workman's companion; etc.

(Plates by M. A. Nicholson, R. Elsam, W. Inwood, and others. Thos. Kelly, publ.)

40. Lond. 1823.

—Both presented by Mr. Sydney Tatchell [F.].

BRITISH STANDARDS INSTITUTION

Schedule of B—S—Specifications applicable to building works. June, 1936.

Handbook of information . . . and indexed lists, etc. 1936. 6d. R.

July, 1936.

1936. 1s. R.

SCOTTISH TRADE COURIER

—1936.

1936. R.

STRUCTURAL ELEMENTS

BANKS (LANGLEY)

The Joiners' instructor. (On staircasing and handrailing, running title.)

40. Lond. [1849.]

Presented by Mr. Sydney Tatchell [F.].

BUILDING PRACTICE

DAVIES (B. PRICE)

Direct labour and contract in the execution of municipal works. (Instn. of Municipal & County Engineers.)

page-proof 10¼". 1936.

Presented by the author [F.].

CONSTRUCTION

BRITISH STANDARDS INSTITUTION

British standard specifications :—
No. 680 . . . for Welsh roofing slates.

No. 368 . . . for pre-cast concrete flags.
Revised ed. 1936. 2s. R.

NICHOLSON (PETER)

Practical carpentry, joinery, and cabinet-making; etc. Revised
by Thomas Tredgold.

40. Lond. 1851.
Presented by Mr. Sydney Tatchell [F.].

SANITARY SCIENCE AND EQUIPMENT

MINISTRY OF HEALTH

Public Health Bill. Explanatory memorandum, etc. (Cmd.
5238.)

leaflet 9½". Lond.: H.M.S.O. 1936. 1d. R.

BRITISH STANDARDS INSTITUTION

British standard specifications :—
No. 160 . . . for slate and marble insulating slabs for electric
power switchgear etc.

Revised ed. 1936. 2s. R.

WALDRAM (P. J.)

*The Provision of adequate daylight in building regulations.
(From Proc. Int. Illumination Congress, 1931.)

[Reprint.] pam. 9½". Camb.: U.P. 1931 (1936).

Presented (2) by the author [F.] to Loan Library.

Original ed. in Reference Library.

BRITISH STANDARDS INSTITUTION

British standard specifications :—

No. 438 . . . for cooker control units, etc.

Revised ed. 1936. 2s. R.

TOPOGRAPHY

MASSINGHAM (H. J.)

English downland. (The Face of Britain series.)

8½". viii+120 pp.+pls. Lond.: Batsford. 1936. 7s. 6d. P.

HIGHWAYS AND BYWAYS series

*— in Devon and Cornwall. By A. H. Norway. (J. Pennell
and H. Thomson, illus.)

80. Lond. 1898. P. (second-hand). Extra copy for Loan Library.

FAY (E. STEWART)

Londoner's New York.

7¼". xiv+235 pp.+pls. Lond.: Methuen. 1936. 8s. 6d. P.

HUGHES (G. M.)

Roman roads in south-east Britain. etc. With notes by I. D.
Margary.

7¼". 231 pp. Lond.: Geo. Allen & Unwin. 1936. 7s. 6d. P.

SCAPA SOCIETY

Annual report for 1935.

[1936]. R.

DRAWINGS

CEPALÙ, Sicily

Cathedral. Geo. Hubbard, del.

7 sheets D., 2 Ph. 1896.

Presented by Mr. P. W. Hubbard [F.].

Obituaries

ROBERT STARK WILKINSON [A.]

Robert Stark Wilkinson, the Father of the R.I.B.A.,
died in Montevideo on 26 July. Born in 1844, he was
turning out first-rate work at ninety and more years
afterwards.

He passed the R.I.B.A. examination (then voluntary)
in the year 1866. He passed in the class of Proficiency—
a very different proposition to the examination of
to-day.

A brilliant man, with nothing whatever of self-seeking
in his disposition, he did not apply for the Associateship
until many years after he had passed the examination.
To-day it is more than sixty years since the date of his
election in 1873. He was the hardest of all hard
workers, rapid and sure in all he did; and if ever there
was an all-round man it was Stark Wilkinson. A superb
draughtsman, he used to draw on the wood blocks for
The Builder before the day of photo-lithography, did
drawings for, and got medals from, the Salon, and his
architectural drawings at the Royal Academy were
accompanied in the watercolour room with delightful
watercolours of everything except architecture.

I have said that he was a hard worker. He was,
indeed, but most of it was turned out at night. He
loved his glass of sherry and his pipe and—chess. There
wasn't much morning with him, his hours were late,
his afternoons were pipe and chess, but when the office
was closed then his work began.

I remember as a boy—I think it was in the year 1882
—seeing him start a job one Saturday afternoon, a
competition design for the big Exeter lunatic asylum.
It was a double competition, preliminary and final.
On Monday the drawings were finished—in ink. His
drawings were always done with a bow-pen. He said
that it saved trouble when you wanted a circle. The
design got him placed in the final competition. His
motto (there were mottoes in those days) was "Stet,"
and he let it stand, for in the second competition he
sent in the same drawings ("it saved a lot of trouble"),
and he was placed first; the assessor stating that he
was easily best in spite of his omissions.

Right up to the last he was at work with the same
happy-go-lucky ways and methods, always trustworthy,
often brilliant, and the most lovable and charming
personality imaginable. Very fragrant are the memories
that the Father of the R.I.B.A. leaves behind.

ARNOLD MITCHELL [F.]

J. O. MARCHAND [F.]

We regret to record the death on 11 June of Mr. John
Omer Marchand, at Montreal.

Mr. Marchand was born in 1873, and received his early
education at the Académie de l'Archevêché and with the
Sulpician Fathers of the Collège de Montréal. He began
the study of architecture with Perrault and Mesnard, and at
the same time attended evening classes at the old École des
Arts et Manufactures.

In 1893, Mr. Marchand entered the Ecole des Beaux Arts at Paris, and as early as 1900 was entrusted by the Hon. J Israel Tarte, then Minister of Public Works in Canada, with the planning and management of the Canadian pavilion at the Paris "Exposition Universelle."

After 10 years spent in study he returned to Canada: with several architectural medals and the French Government diploma and entered into partnership with Stevens Haskell, another graduate of the Ecole des Beaux Arts; this association lasted until Mr. Haskell's death in 1913.

Among his principal architectural works are the reconstruction of the Parliament building at Ottawa, the Mother House and Normal School of the Congregation of Notre Dame, the chapel of the Grand Seminary, Bordeaux Jail, the City Hall Annex, the St. Cunegonde Parish Church, St. Boniface Cathedral, and the Grey Nuns Hospital at St. Boniface. His more recent works include the Juvenile Court of Montreal, the "Institut Pedagogique," the Institut de Mont St. Antoine, the Montreal Water Works pumping station in McTavish street, and various schools for the Catholic School Commission of Montreal.

Mr. Marchand was for some time consulting architect to the City of Montreal, and shortly before his death the French Ministry of Industry and Commerce had invited him to co-operate in plans for the 1937 Paris Exhibition buildings. In 1926 the French Government had created him a Chevalier de la Legion d'Honneur as a token of gratitude for his work for French Art. He was a member of the board of trustees of the National Gallery of Ottawa and of the Beaux Arts Institute of Design of New York.

Mr. Marchand is survived by his wife, the former Eva Le Boutillier, grand-daughter of the late Hon. John Le Boutillier, and one daughter.

ALFRED ROBERTS [F.]

We regret to record the death on 17 July of Mr. Alfred Roberts, a Fellow of the Institute since 1904.

Mr. Roberts was born in 1864 at Combe Farm, Greenwich—near where Westcombe Park Station now is—the residence of Anne Boleyn; he was articled to Thomas Dinwiddy [F.] at Crooms Hill, Greenwich, and attended architectural association classes. He practised nearly all his life in Greenwich, and specialised chiefly in factory designing. He acted for more than forty years for many well-known firms, among them the Chelsea Electricity Supply Co. (all generating and sub-stations); G. A. Harvey & Co. (the whole of a factory and 72 houses and flats for the works housing estate); the General Steam Navigation Co., and British Ropes, Ltd.

Mr. Roberts was for many years Rating Surveyor to the Greenwich and Deptford Borough Councils. He was a Freemason of the City of London and a Past Warden of the Carpenters' Company. Mr. Roberts was one of the first motorists in England and helped to organise the first motor race meeting at Bexhill in 1905.

He succeeded in practice by his son, Mr. Kenneth Roberts, who will continue practice under the name of Alfred Roberts at the same address.

J. ARNOLD CRUSH [F.]

Mr. Crush, who died on 3 June, was born in 1885, and practised for twenty-five years in Birmingham. He was articled to Sir Edwin Lutyens, and became a Fellow in 1925. Mr. Crush took an especial interest in school work and education, and his principal architectural works include Douai Abbey, St. Philomena's, Dorridge, Our Lady of Lourdes, New Southgate, the Catholic schools at Cambridge and Hinckley, and he worked for various convents.

Notes

C.P.R.E. NINTH NATIONAL CONFERENCE

TORQUAY, 8-11 OCTOBER 1936

The Ninth National Conference for the Preservation of the Countryside will take place at Torquay, under the presidency of the Earl of Crawford and Balcarres, K.T. The Conference will be opened by Lord Fortescue, his Majesty's Lieutenant for Devon, and President of the Devon Branch of the C.P.R.E.

There will be two sessions: Friday morning, 9 October, 10.15 a.m., the Rt. Hon. Sir Halford Mackinder and Mr. Wesley Dougill, M.A. A.M.T.P.I. [A.], on "Coastal Preservation," and Friday afternoon, 9 October, 2.30 p.m., the Chairman of the South Devon Regional Planning Committee (Councillor W. Denis Thomas) on "Development in Rural, Semi-Rural and Coastal Areas, with special reference to the Design and Siting of Buildings and the Preservation of Amenities."

The Mayor of Torquay has kindly consented to hold a reception of members and delegates on Thursday evening, 8 October, at the Marine Spa at 9 p.m.

On Friday evening, 9 October, there will be an informal discussion on general matters.

On Saturday morning, 10 October, there will be a tour of the borough by invitation of the Torquay Corporation.

On Saturday afternoon there will be a visit to Dartington Hall, by kind permission of Mr. and Mrs. L. K. Elmhirst.

On Sunday it is proposed to arrange a tour of the South Devon Regional Planning Area (a charge to cover cost of conveyance will be made to the delegates).

The Conference is not confined to delegates and members of the C.P.R.E., and friends are invited. Full particulars and application forms can be obtained from the Secretary of the C.P.R.E., Mr. H. G. Griffin, 4 Hobart Place, S.W.1.

R.I.B.A. EXAMINATIONS, MAY AND JULY 1936

The questions set at the Intermediate, Final and Special Final Examinations held in May and July 1936 have been published, and are on sale at the Royal Institute, price 1s. (exclusive of postage).

NOTES FROM THE MINUTES OF THE COUNCIL

6 July 1936

MEMBERSHIP OF THE COUNCIL

The President addressed a few words of welcome to the new members of the Council.

SIR E. GUY DAWBER, R.A. [F.] AND SIR JAMES GREY WEST [F.]

On the proposition of the President the cordial congratulations of the Council were conveyed to Sir E. Guy Dawber, R.A., Past-President, and Sir James Grey West [F.] on the well-deserved honour of knighthood which has recently been conferred upon them.

BRITISH ARCHITECTS' CONFERENCE

On the proposition of the President it was resolved that a very hearty vote of thanks be passed in favour of the President and Council of the Hampshire and Isle of Wight Architectural Association, and of all those who offered hospitality and contributed to the success of the recent Conference at Southampton.

EXAMINERS FOR THE R.I.B.A. STATUTORY EXAMINATION FOR DISTRICT SURVEYORS

The Board of Architectural Education reported that as a matter of urgency they had appointed Mr. Cecil Kennard to act as an Examiner in place of Mr. W. G. Perkins, who was unable to serve.

JOINT COMMITTEE OF THE ARCHITECTURAL PROFESSION AND THE ELECTRIC LAMP MANUFACTURERS' ASSOCIATION

On the recommendation of the Science Standing Committee, Mr. L. W. Thornton White [J.] was appointed as one of the R.I.B.A. representatives on the Joint Committee of the Architectural Profession and the Electric Lamp Manufacturers' Association in place of Mr. G. Grey Wornum [F.]

THE STUDENTSHIP OF THE R.I.B.A.

In April 1927, the Council passed a resolution that a Student of the R.I.B.A. should only hold the Studentship as long as he is a bona-fide student of architecture and not engaged in any other occupation.

On the recommendation of the Board of Architectural Education it was decided to delete the words "not engaged in any other occupation" from this resolution.

It was also decided, on the recommendation of the Board, to make it a regulation that if a Student is engaged in professional work as an architect he shall be subject to the regulations governing professional conduct to which Corporate Members of the R.I.B.A. are subject.

NOTES FROM THE MINUTES OF THE COUNCIL

20 July 1936

RETIREMENT OF MR. THOMAS BARRON, PRESIDENT OF THE NATIONAL FEDERATION OF BUILDING TRADES OPERATIVES

On the occasion of Mr. Thomas Barron's retirement from the presidency of the National Federation of Building Trades Operatives after thirteen years' service in that capacity, it was decided to send Mr. Barron a special message of thanks and appreciation for his great and valuable services to the building industry in general and to the R.I.B.A. in particular.

THE EMPLOYMENT OF ARCHITECTS IN THE SCHEME FOR CO-ORDINATING MEANS OF NATIONAL DEFENCE

Mr. E. Stanley Hall (Vice-President), Mr. H. S. Goodhart-Rendel [F.] and Mr. John Dower [J.] were appointed as members of a deputation to meet Sir Thomas Inskip, Minister for the Co-ordination of Defence, to discuss the employment of architects in the scheme for co-ordinating means of national defence.

THE COUNCIL OF THE BRITISH SCHOOL AT ROME

Mr. W. H. Ansell [F.] was re-appointed as one of the two R.I.B.A. representatives on the Council of the British School at Rome for the three years ending June 1939.

R.I.B.A. ARCHITECTURE BRONZE MEDALS

(a) *The Royal Incorporation of Architects in Scotland.*

Mr. W. B. Edwards [F.] (Newcastle-on-Tyne) was appointed as the R.I.B.A. representative on the Jury for the award of the R.I.B.A. Architecture Bronze Medal in the area of the Royal Incorporation of Architects in Scotland.

(b) *The Wessex Society of Architects*

Mr. W. S. Purchon [F.] (Cardiff) was appointed as the R.I.B.A. representative on the Jury for the award of the R.I.B.A. Architecture Bronze Medal in the area of the Wessex Society of Architects.

THE FORMAL ADMISSION OF STUDENTS AT GENERAL MEETINGS

It was decided to discontinue the practice of formally admitting students at General Meetings.

MEMBERSHIP

The following members were elected :—

As Fellows	..	..	..	10
As Associates	..	..	..	18
As Licentiates	..	..	..	7

Election, 19 October 1936

Applications for membership were approved as follows :—

As Hon. Corresponding Member	..	1 application
As Fellows	..	5 applications
As Associates	..	21
As Licentiates	..	6

Reinstatements

The following ex-members were reinstated :—

As Fellow : David Aitken McCubbin (<i>Retd. F.</i>).
As Associate : Horace Beaverstock.
As Licentiate : John Lombardini Northam.

Transfer to the Retired Members' Class

The following members were transferred to the Retired Members' Class :—

As Retired Fellow : William Howe Greene.
As Retired Licentiate : George Prowse Powis.

Resignations

The following resignations were accepted with regret :—

Eustace Corrie Frere [F].
 Clare Arnold Clayton Greene [F].
 Bernard Robinson Hebblethwaite [F].
 John Charles Malcolm Keith [F].
 John Barr [J].
 Willard Bruce Riddell [J].
 Thomas Ridge [J].
 Beatrix Janet Wailes [J].
 John Anderson [L].
 William Beeston [L].
 Adolphus Frederick Cutler [L].
 Alfred Wheat [L].
 George Gilbert Woodward [L].
 George Palmer Smedley (*Retd. L.*).

The resignation of Mr. R. D. Elliott [L.] was also accepted.

Examination Results

The Final Examination qualifying for candidature as Associate R.I.B.A., was held in London and Edinburgh from 8 to 16 July, 1936.

Of the 213 candidates examined 112 passed (41 in Part 1 only, and 1 in Part 2 only) and 101 were relegated. The successful candidates are as follows :

Adam, John Douglas.
 Alden, Muriel (*Part 1 only*).
 Appleton, Frank (*Part 1 only*).
 Archer, Bertram Stuart Trevelyan.
 Baker, John Henry.
 Bearpark, John Ronald (*Part 1 only*).

Beauchamp, Charles Philip (*Part 1 only*).
 Bennett, Harry.
 Bion, Jean Moise (*Part 1 only*).
 Bradshaw, Stanley Wyard.
 Braven, Arthur Charles (*Part 1 only*).
 Brett, Reynolds Keen.

Bright, Geoffrey Newnham (*Part 1 only*).
 Brooks, Raymond Samuel (*Part 1 only*).
 Broughton, Eric Geoffrey.
 Brown, Cyril Clement.
 Bubbs, Edward Cavendish.
 Carter, Alan Ewart.
 Carter, Frederick Harold (*Part 1 only*).
 Chidley, Leslie Claude (*Part 1 only*).
 Cole, Charles Alan Crozier.
 Collins, Eric Victor.
 Cooper, Ernest Colin.
 Craddock, Frederick David.

Crompton, Richard Harper (*Part 1 only*).
 Davies, Thomas Summers.
 Dexter, Kenneth.
 Donaldson, John Ferguson.
 Doody, Cyril Herbert.
 Down, Albert Henry (*Part 1 only*).
 East, Thomas William (*Part 1 only*).
 Farmer, Arthur Henry (*Part 1 only*).
 Forge, James William Lindus (*Part 1 only*).
 Fox, George Arthur.
 Frost, Walter Sydney.

Garner, Clifford Michael John (Part 1 only).
 Gerrard, Arthur Eli (Part 1 only).
 Gravell, Arthur Clare.
 Gray, Richard Wyndham.
 Greenwood, Colin Prince (Part 1 only).
 Hannam, Francis Lambson.
 Harris, Arthur Noel.
 Hastie, James Ponton.
 Hayns, Herbert Henry.
 Heckingbottom, Frank.
 Hill, John James.
 Hodgson, Edward (Part 1 only).
 Horsman, Reginald Alfred.
 Hunt, Henry Arthur (Part 1 only).
 Hurst, James.
 Jacobs, Christopher (Part 1 only).
 Jeffrey, Alfred Ernest.
 Johnson, Norman Squire.
 Jones, Edward Stanton.
 Knight, Alexis Edward (Part 1 only).
 Lazenby, Arthur.
 Leggett, Arthur Robert Edward (Part 1 only).
 Levy, Eric.
 Lilley, Victor George (Part 1 only).
 Lomas, Leslie Clarson (Part 1 only).
 Lowe, George Charles.
 Luxton, Horace Newcombe (Part 1 only).
 Meeson, Francis James.
 Menell, Gerard Bevington.
 Mills, Edward David (Part 1 only).
 Mills, Reginald Philip.
 Milnes, Charles Brian Kendall (Part 1 only).
 Nealon, Kenneth.
 Neil, Charles Arthur Wells.
 Nicholls, John.
 Nicholls, Ralph George.
 Nuttall, Harold.
 Pardoe-Williams, Ronald Spicer (Part 1 only).
 Pearson, Gordon.

Perry, Kenneth (Part 1 only).
 Pite, Hugh Stanley.
 Price, Philip John (Part 1 only).
 Prince, Arthur (Part 1 only).
 Pursell, Harold Gordon.
 Raven, Geoffrey.
 Roberts, Charles William.
 Rowe, Kenard Robert Charles.
 Sage, Howard Wilfred Mortimer (Part 1 only).
 Sandeman, Colin James.
 Seymour, Kenneth James Hyde (Part 1 only).
 Shallis, Alfred Charles (Part 1 only).
 Shannon, Reginald Paul.
 Shapley, Robert Ernest.
 Sharp, Colin Basil.
 Shelbourn, Alfred Poyner.
 Shephard, Cameron Leslie (Part 1 only).
 Smith, Joseph Edwin.
 Smith, William Victor (Part 1 only).
 Spencer, Alfred Lloyd.
 Stantiall, Harold Joseph George (Part 1 only).
 Stirling, Hector John Watt.
 Stobart, Fred.
 Stubbs, George Hamilton Lewis.
 Suggitt, Jack Alwyn.
 Tadmam, James Albert (Part 1 only).
 Taylor, Philip Nevill.
 Thomas, Isaac Hopkin (Part 1 only).
 Toomer, John Edwin (Part 2 only: to pass Part 1).
 Turner, Sydney.
 Vowels, Cyril Edgar (Part 1 only).
 Wakeford, Henry Kenneth.
 Wicker, Frank Albert.
 Wilcox, Clement Joseph.
 Williams, Torwerth Maldwyn.
 Williams, Laurence.
 Williams, Morris.
 Young, James Dickson.

THE SPECIAL FINAL EXAMINATION.

The Special Final Examination qualifying for candidature as Associate R.I.B.A., was held in London from 8 to 14 July 1936, and in Edinburgh from 8 to 16 July, 1936.

Of the 47 candidates examined, 17 passed (4 in Part I only) and 30 were relegated. The successful candidates are as follows:

Alderson, George William.
 Broad, Rodney (Part 1 only).
 Cooper, Arthur Frank.
 Daly, Francis Joseph Doonen.
 Dawson, Walter.
 Heald, John.
 Hodge, Frank Stanley.
 Hutton, George Roy.
 Ixer, Eric Arthur William.
 Lamb, Paul Ping-Yin.

Mawer, Eric Douglas (Part 1 only).
 Scates, Laurence Sidney.
 Stirrup, Norman.
 Thomson, Charles Robert (Part 1 only).
 Tipling, Arthur Raymond.
 Turner, John Raymond (Part 1 only).
 Whitwham, Harold Heaton.

THE EXAMINATION IN PROFESSIONAL PRACTICE FOR STUDENTS OF SCHOOLS OF ARCHITECTURE RECOGNISED FOR EXEMPTION FROM THE R.I.B.A. FINAL EXAMINATION.

The Examination was held in London and Edinburgh on 14 and 16 July 1936. Of the 7 candidates examined,

5 passed and 2 were relegated. The successful candidates are as follows: Graham, Alexander, jun.; McClure, John.; Samuel, John Donaldson.; Somerville, James Lees.; Wright, Derek Selby.

Notices

THE BUILDING EXHIBITION, OLYMPIA, 1936

It has been customary for many years past for the Secretary of the Institute to send an invitation to members to attend the biennial exhibitions at Olympia. Through the kindness of the organiser of the exhibition, Mr. H. Greville Montgomery, Hon. A.R.I.B.A., each ticket presented will ensure the payment of 2s. as a contribution to the Architects' Benevolent Society.

The exhibition is open from 16 to 30 September inclusive, and it is hoped that members of the Institute will use the ticket that will be found enclosed with this issue of the JOURNAL.

EXHIBITION OF DRAWINGS SUBMITTED FOR THE ARCHIBALD DAWNAY SCHOLARSHIPS, 1936

An exhibition of the drawings submitted for the Archibald Dawnay Scholarships, 1936, will be held in the Reception Room at the R.I.B.A. from Thursday, 10 September, to Saturday, 19 September 1936, inclusive, and will be open daily between the hours of 10 a.m. and 7 p.m. (Saturdays 10 a.m. and 2 p.m.).

PROFESSIONAL ADVERTISING

The attention of the Practice Standing Committee has been drawn to the fact that the publishers of certain journals are approaching architects for details of their professional activities, which the publishers propose to embody in the editorial columns of their journals. In the case of one particular firm of publishers, several members forwarded to the Institute the proposed article as drafted by the editor and sent to the architects for any additions or amendments the architects desire. In each case the wording of the articles is identical, with the exception of the names and addresses of the firms of architects to whom they were sent.

The Committee desire to warn members generally against this undesirable form of publicity. The acceptance by members of invitations of this nature from firms of publishers is, in the opinion of the Committee, directly contrary to the Code of Professional Practice and tantamount to advertising.

BUILDING SURVEYING EXAMINATIONS

The R.I.B.A. Statutory Examination qualifying for candidature as District Surveyor in London and the R.I.B.A. Examination qualifying for candidature as Building Surveyor under Local Authorities will be held at the R.I.B.A. on 7, 8 and 9 October 1936. Applications for admission to the examinations must be received not later than 16 September 1936.

ASSOCIATES AND THE FELLOWSHIP

Associates who are eligible and desirous of transferring to the Fellowship are reminded that if they wish to take advantage of the election to take place on 30 November 1936 they should send the necessary nomination forms to the Secretary R.I.B.A. not later than Saturday, 26 September.

LICENTIATES AND THE FELLOWSHIP

The attention of Licentiates is called to the provisions of Section IV, Clause 4 (b) and (c), of the Supplemental Charter of 1925. Licentiates who are eligible and desirous of transferring to the Fellowship can obtain full particulars on application to the Secretary R.I.B.A., stating the clause under which they propose to apply for nomination.

Competitions

The Council and Competitions Committee wish to remind members and members of Allied Societies that it is their duty to refuse to take part in competitions unless the conditions are in conformity with the R.I.B.A. Regulations for the Conduct of Architectural Competitions and have been approved by the Institute.

While, in the case of small limited private competitions, modifications of the R.I.B.A. Regulations may be approved, it is the duty of members who are asked to take part in a limited competition to notify the Secretary of the R.I.B.A. immediately, submitting particulars of the competition. This requirement now forms part of the Code of Professional Practice in which it is ruled that a formal invitation to two or more architects to prepare designs in competition for the same project is deemed a limited competition.

COMPETITION FOR A DESIGN FOR THE RECONSTRUCTION OF THE MAIN ENTRANCE TO SUTTON PARK, SUTTON COLDFIELD

Members of the Royal Institute of British Architects and of its Allied Societies must not take part in the above competition because the conditions are not in accordance with the published Regulations of the Royal Institute for Architectural Competitions.

COMPETITION FOR NEW SCHOOL, WORCESTER

The Competitions Committee desire to call the attention of members to the fact that the conditions of the above competition are not in accordance with the regulations of the R.I.B.A. The Competitions Committee are in negotiation with the promoters in the hope of securing an amendment. In the meantime members should not take part in the competition.

BELFAST: NEW WATER OFFICES

The Belfast City and District Water Commissioners are proposing to hold a competition for new Office Buildings and Mr. H. Austen Hall [F.] has been appointed to act as Assessor. Conditions are not yet available.

BIRMINGHAM: NEW CENTRAL TECHNICAL COLLEGE, ETC.

The Corporation of the City of Birmingham are to hold a competition for a new Central Technical College, Commercial College and School of Arts and Crafts. Mr. J. R. Adamson [F.] has been appointed to act as Assessor and the premiums to be offered will be £750, £500 and £250. Conditions will be issued in the near future.

DUNDEE: COLLEGE OF ART

The Dundee Institute of Art and Technology are to hold a competition for the Duncan of Jordanstone College of Art and Mr. J. R. Leathart [F.], has been appointed to act as Assessor. Conditions are not yet available.

EDMONTON: NEW TOWN HALL BUILDINGS

The Edmonton Urban District Council are proposing to hold a competition for new Town Hall Buildings, and Mr. E. Berry Webber [A.] has been appointed to act as Assessor. No conditions are available yet.

FARNHAM: NEW COUNCIL OFFICES

The Farnham Urban District Council invite architects practising in the United Kingdom to submit in competition designs for new Council Offices.

Assessor: Mr. E. Vincent Harris, A.R.A., O.B.E. [F.].

Premiums: £250, £150 and £100.

Last day for receiving designs: 31 October 1936.

Last day for questions: 31 August 1936.

Conditions of the competition may be obtained on application to Mr. A. A. Minns, Clerk of the Council, Council Offices, Farnham, Surrey. Deposit, £1 1s.

GLOUCESTER: NEW TECHNICAL COLLEGE

The Corporation of Gloucester invite architects of British nationality, domiciled in the United Kingdom, to submit in competition designs for a new Technical College, etc., at Brunswick Road, Gloucester.

Assessor: Mr. Henry V. Ashley [F.].

Premiums: £350, £250 and £150.

Last day for receiving designs: 15 December 1936.

Last day for questions: 26 September 1936.

Conditions of the competition may be obtained on application to The Education Officer, Belsize House, Brunswick Square, Gloucester. Deposit, £2 2s.

HACKNEY: RECONSTRUCTION OF CENTRAL BATHS

The Hackney Borough Council are proposing to hold a competition for the reconstruction of the Central Baths, and Mr. Frederick J. Horth [F.] has been nominated to act as Assessor. Conditions are not yet available.

HOLBORN: PUBLIC BATHS AND WASHHOUSES

The Metropolitan Borough of Holborn invite architects to submit in open competition designs for new Public Baths, etc., to be erected in Broad Street and Endell Street.

Assessor: Mr. Kenneth M. B. Cross [F.].

Premiums: £300, £200 and £100.

Last day for receiving designs: 31 December 1936.

Last day for questions: 1 October 1936.

Conditions of the competition may be obtained on application to Mr. Lionel J. Walford, Town Clerk, Town Hall, High Holborn, London, W.C.1. Deposit £2 2s.

LATHOM PARK, LANCASHIRE: MENTAL HOSPITAL AND INSTITUTION FOR MENTAL DEFECTIVES

The Lancashire Mental Hospitals Board invite Chartered and/or Registered British and Irish architects to submit in competition designs for a new Mental Hospital and a new Institution for Mental Defectives proposed to be erected on a site at Lathom Park, near Ormskirk.

Assessors: Professor Patrick Abercrombie [F.].

Mr. Charles E. Elcock [F.].

Mr. John Kirkland [F.].

Premiums: £500, £400 and £300 in each group.

Conditions of the competition were obtainable before 1 September on application to the Clerk to the Lancashire Mental Hospitals Board, County Hall, Preston. Deposit £3 3s.

LEAMINGTON SPA: NEW POLICE AND FIRE STATIONS

The Corporation of Leamington Spa are proposing to hold a competition for new Police and Fire Stations, and Mr. R. Norman Mackellar [F.] has been appointed to act as Assessor. The competition will be open to Registered architects within the area of the Birmingham and Five Counties Architectural Association. Conditions are not yet available.

LEEDS: NEW CENTRAL PUBLIC BATHS

The Corporation of Leeds invite architects of British nationality to submit, in competition, designs for new Central Public Baths.

Assessor: Mr. Kenneth M. B. Cross [F].
 Premiums: £350, £200 and £100.
 Last day for receiving designs: 29 October 1936.
 Last day for questions: 28 September 1936.
 Conditions of the competition may be obtained on application to the Town Clerk, Town Hall, Leeds. Deposit £1 1s.

LLANDUDNO: NEW HOSPITAL BUILDINGS

The Committee of the Llandudno and District Hospital invite registered architects of British nationality to submit in competition designs for a new hospital.

Assessor: Mr. R. Norman Mackellar [F].
 Premiums: £250, £150 and £75.
 Last day for receiving designs: 31 October 1936.
 Last day for questions: 28 August 1936.
 Conditions of the competition may be obtained on application to the Honorary Secretary, New Hospital Scheme, Town Hall, Llandudno. Deposit £1 1s.

NEWCASTLE-UNDER-LYME: BLOCK OF SHOPS AND OFFICES

The Newcastle-under-Lyme Borough Council invite architects of British nationality to submit in competition designs for a new Block of Shops and Offices to be erected in High Street.

Assessor: Mr. Harry S. Fairhurst [F].
 Premiums: £300, £200 and £100.
 Last day for submitting designs: 31 October 1936.
 Last day for questions: 31 August 1936.
 Conditions of the competition may be obtained on application to the Town Clerk, Town Clerk's Office, Newcastle-under-Lyme. Deposit £2 2s.

NEWPORT, MON.: NEW CIVIC CENTRE

The Newport (Mon.) Corporation invite architects of British nationality to submit in competition designs for new Civic Buildings, including Town Hall, Municipal Offices, Law Courts and Police Station.

Assessors: Mr. E. Berry Webber [A].
 Mr. C. F. Ward [F].
 Premiums: £750, £500, £300 and £200.
 Last day for receiving designs: 30 November 1936.
 Last day for questions: 1 September 1936.
 Conditions of the competition may be obtained on application to Mr. O. Treharne Morgan, Town Clerk, Town Hall, Newport, Mon. Deposit £2 2s.

SOUTH SHIELDS: ASSEMBLY HALL AND LIBRARY

The South Shields Town Council propose to hold a competition for an Assembly Hall and Library to be erected on a site at the rear of the Town Hall. Mr. Arthur J. Hope [F.] has been appointed to act as Assessor. Conditions are not yet available.

TIMBER "TOURIST CAMP"

The Timber Development Association, Ltd., are holding a competition for the lay-out and individual design of a group of camp buildings for a holiday camp, in timber.

Assessors: Sir E. Guy Dawber, R.A., F.S.A. [F].
 Mr. G. A. Jellicoe [F].
 Mr. G. Langley Taylor [F].
 Mr. John Gloag.

Premiums: £150, £50, £25 and three special mention awards of £10 each.

Last day for receiving designs: 26 October 1936.

Conditions may be obtained on application to The Timber Development Association, Ltd., 69-73 Cannon Street, London, E.C.4.

COMPETITION FOR JOINT RAILWAY RECEIVING OFFICES IN LONDON

The four main railway companies (L.N.E.R., L.M.S., G.W.R. and Southern) invite British-born architects to submit in competition designs for Joint Receiving Offices.

Assessors: Mr. L. H. Bucknell [F].
 Mr. C. Grasemann.
 Mr. W. H. Hamlyn [F].
 Mr. Charles Holden, V.P.R.I.B.A.

Premiums: £300, £125, £50 and £25.

Last day for receiving designs: 7 November 1936.

Last day for questions: 17 September 1936.

Conditions of the competition may be obtained on application to Mr. W. H. Hamlyn [F], Chief Architect, L.M.S. Railway, St. Pancras Chambers, London, N.W.1. Deposit £1 1s.

COMPETITION RESULT**BIRMINGHAM: WORKING CLASS FLATS**

1. Messrs. G. Grey Wornum [F.] and A. C. Tripe [A].
2. Messrs. Praxis and David Goddard [A.] in collaboration with Miss M. J. Blanco White (*Student*) and with the British Steelwork Association.
3. Messrs. J. F. Howes [A.] and F. L. Jackman [A].
4. Major T. Cecil Howitt, D.S.O. [F.] (Nottingham).

Members' Column

Owing to limitation of space, notices in this column are restricted to changes of address, partnerships vacant or wanted, practices for sale or wanted, office accommodation, and appointments vacant. Members are reminded that a column in the Advertisement Section of the Journal is reserved for the advertisements of members seeking appointments in architects' offices. No charge is made for such insertions and the privilege is confined to members who are definitely unemployed.

PRACTICE WANTED

MEMBER having small country house practice wishes to join established firm in a country or seaside town with view to partnership. Small capital available. Reply Box No. 2786, c/o Secretary R.I.B.A.

OFFICES TO LET

SENIOR, with pleasant offices in the Temple, offers furnished accommodation to another architect or surveyor on moderate terms. Good opportunity for junior commencing practice. Box No. 1886, c/o Secretary R.I.B.A.

SHARE IN OFFICE

FELLOW desires an Architect to share his office, consisting of two furnished rooms in Bedford Row. Good position and light. Rent £30 p.a.—Box No. 1176, c/o Secretary R.I.B.A.

ARCHITECT, M.A. [A.], aged 28, would like to meet another architect of approximately the same age who possesses a small office in London, with a view to sharing office accommodation and giving mutual assistance when necessary.

JUNIOR PARTNERSHIP WANTED

ARCHITECTURAL ASSISTANT, fully qualified, with wide experience and good connection, has been building up private part-time practice during the last few years, and now has contracts pending which would necessitate commencement in business on own account, but junior partnership or working agreement with an established firm in Leicester would be preferred. Small capital available. Enquiries in strictest confidence. Box No. 3076, c/o Secretary R.I.B.A.

CHANGES OF ADDRESS

MR. G. FLETT [A.] has joined the firm of Messrs. Edwards, Reid & Booth, of Colombo and Madras. All letters should be addressed to him at Eastern Bank Building, Chatham Street, Colombo, Ceylon.

SIR JOHN BROWN [F.] has moved to The Grange, Ecton, Northampton. Tel.: Cogenhoe 17.

MR. R. H. SHAW has changed his address to 261 Crown Street, Liverpool, 7.

MR. THOMAS ADAMS, D.Eng., F.S.I. [F.], has, on the dissolution of the partnership of Adams, Thompson & Fry by mutual consent, moved to Bush House, Aldwych, London, W.C.2, where he will practice as general consultant in town planning, estate planning and landscape architecture. Telephone number: Temple Bar 9470.

MR. STUART BENTLEY [A.] has been appointed chief architectural assistant to the Borough Engineer and Surveyor, Southampton, and letters should be addressed to him c/o The Borough Engineer and Surveyor, Southampton.

NEW PARTNERSHIPS

PROFESSOR WALTER GROPIUS AND MAXWELL FRY [A.] have entered into partnership, and will practice as Walter Gropius and Maxwell Fry, Architects, 171 Victoria Street, London, S.W.1. Telephone number: Victoria 0605/6.

MR. J. W. BUCHANAN, A.A.Dipl., A.M.T.P.I. [A.], has entered into partnership with the firm of Howard Leicester & Partners, architects. The firm will continue to practise at 6 Southampton Street, W.C.1. Telephone number: Holborn 8291-2.

MR. G. A. JELlicoe has taken into partnership Mr. Russell Page and Mr. Richard Wilson, and in future the firm will be known as "G. A. Jellicoe and Partners."

PARTNERSHIPS WANTED

MEMBER [F.], who until recently had large practice abroad, is desirous of practising in England and would like to get into touch with a fellow-member with a view to forming partnership. South of England preferred. Photographs of buildings constituting practice, bankers' references, all other particulars and capital available. Apply Box No. 2666, c/o Secretary R.I.B.A.

FELLOW (aged 42) with several years' experience in the East in steel-frame and reinforced concrete construction, widely travelled in the U.S.A., Canada, Australia, New Zealand, India, etc., desires partnership with architect in practice in London. Capital available. Early replies are invited to Box No. 2886, c/o Secretary, R.I.B.A.

STUDENT, Registered Architect, wishes to get into touch with another member, with a view to entering into partnership. Has been working abroad for some years. Partnership required 1937, in London. Some capital available. Apply Box No. 6836, c/o Secretary R.I.B.A.

ASSISTANT FREE

ASSOCIATE, on leave from abroad, willing to assist architect in Edinburgh with competition work during winter months in return for office accommodation. Reply Box No. 4086, c/o Secretary R.I.B.A.

Architects' and Surveyors' Approved Society

ARCHITECTS' ASSISTANTS' INSURANCE FOR THE NATIONAL
HEALTH AND PENSIONS ACTS

Architects' Assistants are advised to apply for the prospectus of the Architects' and Surveyors' Approved Society, which

may be obtained from the Secretary of the Society, 26 Buckingham Gate, London, S.W.1.

The Society deals with questions of insurability for the National Health and Pensions Acts (for England) under which, in general, those employed at remuneration not exceeding £250 per annum are compulsorily insurable.

In addition to the usual sickness, disablement, and maternity benefits, the Society makes grants towards the cost of dental or optical treatment (including provision of spectacles).

No membership fee is payable beyond the normal Health and Pensions Insurance contribution.

The R.I.B.A. has representatives on the Committee of Management, and insured Assistants joining the Society can rely on prompt and sympathetic settlement of claims.

A.B.S. Insurance Department

PENSION AND FAMILY PROVISION SCHEME FOR ARCHITECTS

This scheme has been formulated by the Insurance Committee of the Architects' Benevolent Society and is available to all members of the R.I.B.A. and its Allied and Associated Societies.

The benefits under the scheme include:—

(1) A Member's Pension, which may be effected for units of £50 per annum, payable monthly and commencing on attainment of the anniversary of entry nearest to age 65. This pension is guaranteed over a minimum period of five years and payable thereafter for the remainder of life.

(2) The Beneficiary's Pension, payable as from the anniversary mentioned in Benefit No. 1, but to the widow (or other nominated beneficiary) if the member dies before age 65. The amount of this pension is adjusted in accordance with the disparity between the ages of the member and his wife.

(3) Family Provision. Under this benefit a payment of £50 yearly is made to the dependent from the date of death of the member prior to age 65 until attainment of the anniversary previously mentioned, after which benefit No. 2 becomes available.

Provision can be made for any number of units (of £50 per annum) up to a maximum of £500 per annum.

Pension benefit only may be secured if desired and the pension commuted for a cash sum.

Members are entitled to claim rebate of Income Tax on their periodical contributions to the scheme both in respect of pension and of family provision benefit.

Full particulars of the scheme will be sent on application to the Secretary, A.B.S. Insurance Department, 66 Portland Place, W.1.

It is desired to point out that the opinions of writers of articles and letters which appear in the R.I.B.A. JOURNAL must be taken as the individual opinions of their authors and not as representative expressions of the Institute.

Members sending remittances by postal order for subscriptions or Institute publications are warned of the necessity of complying with Post Office Regulations with regard to this method of payment. Postal orders should be made payable to the Secretary R.I.B.A., and crossed.

R.I.B.A. JOURNAL

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